

*Answers to Questions and Comments
Raised by Latvia
on the
National Report of the Czech Republic*



prepared for the purposes of the
First Review Meeting of Contracting Parties
to the
Convention on Nuclear Safety
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LATVIA 1, Page 19, Re: Regulations of SUJB 142/1997: What is the basis for these Type – Approval regulations? Are there any capabilities in the Czech Republic to verify the compliance to relevant technical requirements for packaging assemblies, radiation sources, protective devices, etc.?

Ad a) Regulation of the SONS No. 142/1997 on Design Approval of Packaging for Shipment Storage or Disposal of Radionuclide Sources and Nuclear Materials and on Design Approval of Ionizing Radiation Sources and some Manufactured Articles for Handling Ionizing Radiation Sources (*Design Approval Regulation*) is created by implementing of the IAEA Safety Standards, Safety Series No 6, 7, and 37 (*IAEA Regulations*) to the national legislative. Especially IAEA Safety Standards, Safety Series No. 6, Regulations for the safe Transport of Radioactive Material, 1985 Edition (As Amended 1990) was the basis for the Regulation of the SONS No. 142/1997.

Ad b) In the Czech Republic, there is licensed test-laboratory for testing of the industrial package, Type A package and Type B package up to mass of 3,200 kg and for testing of the special form radioactive material (ARAO, a. s.). Company ŠKODA JS, s. r. o. is owner of the test-place equipped by target for drop testing of the package (models) up to mass of 15,000 kg.

LATVIA 2, Page 21, Re: Construction act, which imposed authorisation procedure based on Construction Office decision and SUJB decision is only as annex to this decision. Does it really mean that the prime responsibility for safety of NPP construction activities lays upon Construction Office? How is cooperation between the Construction Office and SUJB regulated?

Under paragraph 2.1.2 the National Report states, that the so-called „licensing“ procedure is governed in matters of nuclear installations by three laws in the Czech Republic:

- **Construction Act** (Law 50/1976 Coll.),
- **Atomic Act** (Law 18/1997 Coll.),
- **Environmental Act** (Law 17/1992 Coll.),

and, of course, by other related legal documents quoted also in the National Report.

Consistent with the **Construction Act**, a relevant local Construction Office has the right to issue the vital decisions for all construction projects, including those with a nuclear installation. They are namely:

- Site Permit;
- Construction Permit;
- Operational Permits.

If these proceedings might affect the interests protected by special regulations, the Construction Office decision is subject to an agreement or consent with/of the state authorities in charge of these interests. The relevant state authority may reject its consent if the certain conditions are not fulfilled, set out in its decision issued in compliance with the specialised laws making this authority entitled to do so. In case of the construction with a nuclear installation included, the Construction Act makes in its § 126 (para 3) the Construction Office explicitly obliged to require of such an applicant (building organisation) the permission issued by the SÚJB according to the Atomic Act, before it itself issues its decision about the site location, construction permit, as well as an additional permit pertinent to the construction.

The **Atomic Act** defines the activities for which the SÚJB licence is necessary. In addition to the Site Permit, Construction Permit, and Operational Permit it is a multitude of activities, such as the permits bound to individual stages of an nuclear installation commissioning, for reconstruction actions, or other modifications with an impact on nuclear safety, radio-nuclide depositing into environment, and the like. For other information see chapter 3.1.2 of the National Report.

Like with the SÚJB, the Construction Office, when placing its approval on a project with a nuclear installation included, shall require an attitude of other relevant state authorities before issuing its decision. They are mainly the following ones:

- Czech Office for Safety of Work being in charge of a conventional (technical) safety, including the pressure components and electric systems,
- District Office
 - concerned with the fire safety,

- concerned with disposal of wastes,
 - concerned with feedwater and waste water discharging,
- Czech Environmental Inspection being in charge of air protection
- District Hygienic Service concerned with health protection at work as it is defined by the Law 20/1966 Sb. in its applicable wording,
- etc.

Environmental Act, and mainly then the Law 244/1992 Sb, on estimation of the environmental impacts, orders to put under judgement the legally defined construction projects with respect to their environmental impacts within a specialised proceeding in which even the wide public can take their part. This public may be represented by the effected community being a statutory participant of the proceeding, or in the form of the concerned citizen activities. The role of the state authority responsible for the decision about the environmental influence of a nuclear power plant erection belongs to the Ministry of Environment.

From above, the answer to the posed questions should be clear:

- Assessment of the nuclear safety/radiation protection level belongs to SÚJB, not to any Construction Office. Without affirmative attitude of the former the latter cannot issue any site permit, construction permit, or operational permit for any nuclear installation.
- The way of how these state authorities should co-operate in the case of the projects with any nuclear installations included is governed by law and related regulations.

LATVIA 3, Page 40, Re: NPP Training centre: Could you please describe the arrangements for establishment of the centre (Who financed , who set up the scope of training activities)? How trainers were educated and trained and what are the requirements for qualification of trainers?

Within the ČEZ, a.s., 3 training centers has SÚJB license for specialized training of the employees in the area of nuclear activities:

- at the corporate level it is the Training and Exercise Center, Brno,
- while the organizational units of NPP Dukovany and Temelín have their own Training Centers.

The Training and Exercise Center in Brno (hereinafter referred to as „TEC“ only) acts here as the methodological and specialised center in charge of specialised training in the field of nuclear activities. Its responsibility is to set forth the concepts, systems, and goals of the staff specialised education in the area of nuclear activities. The SÚJB has (according to the Atomic Act) licensed the center. The Center also supports the elementary preparation of the staff members engaged in the vital activities in connection with the nuclear safety and radiation protection (including the selected staff members).

The Training Centers of NPP Dukovany and NPP Temelín (hereandafter TC) identify the actual training needs and requirements on specialized competencies of the respective plant staff members. TCs work together with the TEC. After the full-scope simulators are built and commissioned in both of the NPPs, TCs will also provide the training with use of these simulators.

Training programs has to be submitted to the regulatory body together with the licence application.

They are funded by and from the allocated operational and investment budget of the organisational unit to which they belong (i.e. the corporate office in the case of TEC, organisational units of NPP Dukovany or NPP Temelín in the case of their Training Centres).

The one occupying the position of training engineer must in theory have a university degree in a technical/natural science, while for a specialised training in the field of NPPs a group of alpha is required (managing staff), as well as postgraduate teachers study, and necessary health conditions must be met in physical and mental sense. In the case of training engineer being in charge of practical training, the postgraduate teachers course can be replaced by any other teachers education finished in compliance with the approved program of study/training. The instructors leading the simulator training courses must have graduated from a technical university or the one of natural sciences.

To those active in the elementary training in the field of nuclear activities, the group beta is applicable (operative managers), the teachers qualification in line with the approved program of study (training program) and a practice in a NPP management at the level required for the position of the reactor unit manager. The specialised training in the field of nuclear activities can be accomplished only on the basis of the licence in force, issued by the State Supervision authorities in conformity with the Atomic Act.

LATVIA 4, Page 69, Re: Regulations 184/1997: How the values of monetary equivalents for the reduction of collective effective doses were established and what are the numeric values for such equivalence?

Financial equivalents for the collective effective doses are set down in Decree 184/1997 Article 7 and are:

- a) 0.5 million CZK per man-Sv for the radiation practices with average individual effective dose lower than one tenth of limits,
- b) 1 million CZK per man-Sv for the radiation practices with average individual effective dose higher than one tenth of limits but lower one three tenths of limits,
- c) 2.5 million CZK per man-Sv for the radiation practices with average individual effective dose higher than three tenths of limits,
- d) 1 million CZK per man-Sv for the medical exposure and the exposure due to natural radiation sources, and
- e) 5 million CZK per man-Sv for the exposure due to radiation accidents.

These financial equivalents are based on a similar model as proposed by CEPN, France, and NRPB, United Kingdom. Two objectives are addressed: reduction of collective dose and reduction of individual exposures with priority of the reduction of highest individual exposures, close to limits (both limits for radiation workers and limits for members of the public are concerned respectively). The values are comparable with the model proposed by J. Lochard, C. Lefaure et. al., *Proc. of 1996 Int. Congress on Radiation Protection, IRPA9, Vol.1, Vienna, April 14-19, 1996* with the $\alpha_{\text{base}} = 0.5 \text{ mil.CZK}$. Reflecting the Czech gross national product *per capita*, the values are in good compliance with the similar values used in other countries. For comparison: 1 million CZK is approximately 30 thousand USD.