

Government Decree (735/2008)

on Emergency Response Arrangements at Nuclear Power Plants

Issued in Helsinki 27 November 2008

According to the Government decision made on a submission by the Ministry of Employment and the Economy, the following provisions are issued under Section 7 q of the Nuclear Energy Act (990/1987), issued on 11 December 1987, in the form laid down in Act 342/2008:

Chapter 1

Scope of application and definitions

Section 1

Scope of application

This Decree lays down provisions on emergency response arrangements at a nuclear power plant. The Decree shall apply, as necessary, to other nuclear facilities equipped with a nuclear reactor.

Section 2

Definitions

For the purposes of this Decree:

- 1) *emergency situation* shall refer to an accident or event whereby the safety of a nuclear power plant deteriorates or there is a risk of such a deterioration, or which requires enhanced preparedness to act in order to ensure plant safety; emergency situations are classified on the basis of their severity and controllability as follows:
 - *emergency standby* is a situation where the safety level of a nuclear power plant needs to be ensured in an exceptional situation;
 - *site emergency* is a situation during which the nuclear power plant's safety deteriorates or is in danger of deteriorating significantly; and
 - *general emergency* is a situation during which the hazard of such radioactive material releases exists, which may require protective measures in the vicinity of the nuclear power plant;
- 2) *severe accident* shall refer to a situation in which a considerable part of the fuel in a reactor is damaged;
- 3) *site area* shall refer to the area in use by the nuclear facility and the surrounding area, where movement and sojourn is restricted by a decree of the Ministry of the Interior, issued under section 52 of the Police Act;
- 4) *protective zone* shall refer to an area extending to a distance of approximately five kilometres from the nuclear power plant, where land use restrictions are in force; and
- 5) *emergency planning zone* shall refer to an area extending to a distance of approximately 20 kilometres from the nuclear power plant, which

shall be covered by a rescue plan for public protection drawn up by the authorities, as provided for in section 9(2) of the Rescue Act (468/2003).

Chapter 2

Planning of emergency response arrangements

Section 3

Design basis

The planning of emergency response arrangements shall be based on analyses of the progress over time of severe accident scenarios resulting in a potential release. In such a case, variations in the state of the plant, the development of events as a function of time, the radiation situation at the plant, radioactive releases, radioactive release routes and weather conditions shall be taken into account. Planning shall take account of events reducing safety, their controllability and the severity of consequences. Furthermore, planning shall take account of threats related to unlawful action, and the potential consequences thereof. Actions taken in an emergency situation shall be planned so that the safety of people within the power plant site is ensured. Emergency response arrangements shall be consistent with the operation, fire prevention and physical protection of the nuclear power plant. Furthermore, emergency response arrangements shall be compatible with the rescue and emergency plans drawn up by the authorities in preparation for a nuclear power plant accident.

Section 4

Emergency response organisation

The duties of personnel that plans and implements emergency arrangements (*emergency response organisation*) shall be defined.

Section 5

Preparedness

Provisions shall be made at a nuclear power plant to carry out measures required by emergency situations, the analysis of emergency situations and the consequences thereof, assessment of the anticipated development of emergency situations, and communications to the media and the general public. When analysing the situation, the technical status of the plant and release of radioactive materials, or threat thereof, and the radiation situation inside the plant and in the site area and emergency planning zone, shall be assessed.

In emergency situations, the licensee shall be prepared to carry out radiation monitoring at the power plant site and protective zone, alongside meteorological measurements, on the basis of which the dispersion of radioactive materials in the emergency planning zone will be assessed.

To prepare for an emergency situation, places of assembly for personnel at the site area, appropriate facilities and equipment for the emergency response organisation, iodine tablets and reliable communication and alarm systems shall be in place. The emergency response organisation shall provide arrangements for contamination measurements of personnel, and their decontamination.

The licensee shall ensure that a sufficient number of personnel are promptly available and operative throughout the emergency situation.

Section 6 *Emergency plans*

The preliminary emergency plan, as referred to in paragraph 5, section 35(1) of the Nuclear Energy Decree (161/1988), and the emergency plan as referred to in paragraph 7, section 36(1) of the aforementioned Decree, and any amendments thereto, must be submitted to the Radiation and Nuclear Safety Authority (STUK) for approval. The emergency plan forms part of the rescue plan as referred to in section 9(2) of the Rescue Act. The licensee shall submit approved emergency plans and any amendments thereto to the Ministry of the Interior and the State Provincial Office and Fire and Rescue Services concerned.

Chapter 3 **Maintenance of preparedness**

Section 7 *Maintenance of preparedness for action*

In order to maintain preparedness for action at the nuclear power plant, the licensee shall arrange appropriate training and exercises for its personnel on an annual basis. Cooperation exercises with the authorities shall be arranged regularly, and always prior to the commissioning of a new nuclear power plant unit.

The licensee shall arrange preparedness training for all members of the nuclear power plant's staff, and permanent and temporary employees working at the site area.

Facilities and equipment reserved for emergency situations shall be maintained in operational condition at all times.

Furthermore, the emergency plan and instructions shall be kept up to date.

Chapter 4 **Action in an emergency situation**

Section 8 *Notification of emergency situation*

The licensee shall inform the Radiation and Nuclear Safety Authority (STUK) and the Emergency Response Centre concerned without delay about any declaration of an emergency situation, and the classification of such an emergency situation, in compliance with paragraph 1, section 2 herein.

Section 9 *Action in an emergency situation*

In an emergency situation, the required measures in accordance with the emergency plan, and other necessary measures shall be undertaken without delay in order to control the situation and prevent or limit radiation exposure.

During the emergency situation, the licensee shall submit situation assessment on the event to the Radiation and Nuclear Safety Authority (STUK), the commander of rescue operations, as specified in Section 44 of the Rescue Act, and the Emergency Response Centre concerned, alongside recommendations, significant decisions and justifications thereof.

Section 10 *Command of operations in an emergency situation*

In an emergency, the on-site emergency manager of the nuclear power plant, as specified in the emergency plan, initiates operations and remains

in command of operations at the power plant site, until the commander of rescue operations announces that he/she assumes responsibility for said rescue operations. In such a case, the nuclear power plant's on-site emergency manager shall ensure that a sufficient number of personnel holding expert knowledge of nuclear technology and radiological protection are designated to assist the commander of the rescue operations. The licensee is in charge of matters related to nuclear safety and radiation protection at the nuclear power plant.

The nuclear power plant's on-site emergency manager issues recommendations on population protective actions to the commander of rescue operations, until the Radiation and Nuclear Safety Authority (STUK) assumes responsibility for issuing such recommendations.

Section 11

Termination of an emergency situation

The emergency plan will define criteria governing the principles concerning the termination of measures due to an emergency situation. A precondition for the termination of measures is that the nuclear power plant has been brought into a safe state, releases of radioactive materials do not exceed the thresholds set for normal operation and the necessary post-emergency measures are initiated.

If rescue operations continue after the termination of the emergency situation, the licensee shall be prepared to engage in cooperation corresponding to that which occurs during an emergency situation.

Chapter 5

Miscellaneous provisions

Section 12

Measures pertaining to rescue operations

Issued in Helsinki, 27 November 2008

Mauri Pekkarinen, Minister of Economic Affairs

Pasi Mustonen, Senior Adviser

Provisions concerning the licensee's obligation to participate in the drafting of a rescue plan for an accident occurring in a nuclear power plant are laid down in section 9(2) of the Rescue Act. The licensee shall, in cooperation with the local rescue services, supply the population with advance instructions on preparing for nuclear emergency occurring in the emergency planning zone, and distribute iodine tablets in advance to the population within the protection zone. In an emergency, the licensee shall participate in warning any members of the population who are under imminent threat.

The licensee shall maintain continuous preparedness for performing measures related to rescue operations in an emergency situation. Such measures shall be practised in cooperation with the authorities concerned. Plans for measures related to rescue operations are included in the emergency plan.

In addition to subsections 1—3 herein, provisions concerning plans and communications are laid down in a Decree of the Ministry of the Interior on rescue services plans prepared for nuclear and radiological emergencies and communication on emergencies (520/2007).

Section 13

Entry into force

This Decree will enter into force on 1 December 2008.

This Decree will repeal the Decision of the Council of State on the general regulations for emergency response arrangements at nuclear power plants (397/1991), issued on 14 February 1991.

Measures required for the enforcement of the Decree can be undertaken prior to its entry into force.