

**REPORT ON ENSURING RESPONSE
PREPAREDNESS AND RADIATION
EXTRAORDINARY EVENT RESPONSE IN
THE CZECH REPUBLIC**

PRAGUE, 31 DECEMBER 2023

INTRODUCTION

The first report on emergency preparedness and response was drawn up as the national report of the Czech Republic in 2014 on the basis of the requirement at the time of the International Atomic Energy Agency for its preparation as the basis for the negotiations of representatives of the States, which are members of the Convention on Early Notification of a Nuclear Accident and of the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency. Because this report provided very useful and clear information about the state of this issue in the Czech Republic and because the Atomic Act and its implementing regulations were amended in 2017, it turned out to be expedient to update this report and draw up this second report on ensuring response preparedness and radiation extraordinary event response in the Czech Republic.

In the second report, information is provided regarding the ensuring of response preparedness and radiation extraordinary event response, as part of the newly defined radiation extraordinary event management system, as they correspond to the situation as of 31 December 2023.

This report was drawn up by the State Office for Nuclear Safety in cooperation with the Ministry of the Interior - General Directorate of Fire and Rescue Service of the Czech Republic (hereinafter referred to as the “MV-GŘ HZS ČR”), and the operator of nuclear power plants, i.e. ČEZ, a.s.

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BASICS OF THE CRISIS MANAGEMENT SYSTEM AND THE RADIATION EXTRAORDINARY EVENT MANAGEMENT SYSTEM IN THE CZECH REPUBLIC

A crisis management system is in place in the Czech Republic (hereinafter referred to as the “CR”), which is defined as a set of the management activities of crisis management authorities focused on the analysis and evaluation of safety risks and the planning, organisation, implementation and control of activities carried out in connection with the preparation for crisis situations and their solution. The crisis management system is therefore applied both in the area of crisis preparedness and in the solution of crisis situations. In addition, the crisis management system includes the radiation extraordinary event management system.

The cornerstone of the radiation extraordinary event management system was introduced in 1997, when emergency preparedness in the Czech Republic was established by Act No. 18/1997 Coll.¹ This act was replaced by Act No. 263/2016 Coll., the Atomic Act, which redefines a number of terms in this area, including radiation extraordinary event management. It redefines the obligations of the licence holder, i.e. also of the operator of a nuclear power plant (hereinafter referred to as “NPP”) or a workplace with sources of ionising radiation, to ensure the management of radiation extraordinary event during the activities carried out by the operator on the basis of the issued licence. Act No. 263/2016 Coll., among other things, stipulates that the State Office for Nuclear Safety (hereinafter referred to as “SÚJB”) issues relevant licences on the basis of an application for a licence, which must be accompanied by a number of documents. The attached documents for most licences include the on-site emergency plan, which must be approved by SÚJB in the event of application from the NPP operator. Any change of the plan must be approved. The SÚJB shall approve, among other things, in the event that the occurrence of a radiation accident is not excluded, the establishment of the emergency planning zone (hereinafter referred to as “ZHP”).

The fundamental act applicable to the emergency response system is Constitutional Act No. 110/1998 Coll., under which the Government ensures safety of the citizens of the Czech Republic. Under this Act, the National Security Council is established as a standing working body of the Government, preparing to the Government proposals for measures to ensure security of the Czech Republic (see: <https://www.vlada.cz/cz/pracovni-a-poradni-organy-vlady/brs/brs-uvod-3851/>). The National Security Council has a number of permanent working committees, one of which is the Civil Emergency Planning Committee (see <https://www.vlada.cz/cz/ppov/brs/pracovni-vybory/civilni-nouzove-planovani/vybor-pro-civilni-nouzove-planovani-109279/>). This committee was established in 1998 and its activities aim at coordination and planning of measures for internal security of the state. The Chairperson of the State Office for Nuclear Safety is a member of this Committee.

The fundamental acts for the needs of crisis management in the Czech Republic were adopted in 2000. These are Act No. 238/2000 Coll.², Act No. 239/2000 Coll., Act No. 240/2000 Coll., and Act No. 241/2000 Coll. (hereinafter referred to as “crisis legislation”), of which the most important for the purposes of describing the incorporation of the radiation extraordinary event management system into the crisis management system are Act No. 239/2000 Coll., and Act No. 240/2000 Coll.

Act No. 239/2000 Coll., defines the integrated rescue system (hereinafter referred to as “IZS”), its components and the scope of their operation. Furthermore, for the needs of preparation for extraordinary events and for the performance of rescue and remedial work, the scope and competences of state and

¹ All acts referred to in this report are acts as amended. For an overview of all acts with their full titles and possible amendments as of 31 December 2020 see Annex 1.

² Repealed and replaced by Act No. 320/2015 Coll., Act on the Fire and Rescue Service of the Czech Republic and on Amendments to Certain Acts (Act on Fire and Rescue Service)

local authorities, rights and obligations of natural and legal persons are set out in Act No. 239/2000 Coll. Under the provisions of this Act, the regional authorities are required to draw up a regional emergency plan and the authorities of municipalities with enlarged jurisdiction are required to draw up the off-site emergency plan, provided they are subject to this obligation under the provisions of special legislation. If the emergency planning zone goes beyond the administrative district of an authority of municipality with enlarged jurisdiction, the obligation to elaborate the off-site emergency plan is imposed upon the competent regional authority. These tasks of the regional authority and the municipal authority of the municipality with enlarged jurisdiction are performed by the regional fire and rescue service.

Preparation for crisis situations, other than situations related to defence of the Czech Republic against external attack, is governed by the provisions of Act No. 240/2000 Coll. The act defines crisis situations and sets out responsibilities of the Government, the ministries and other central administration authorities (hereinafter referred to as “ÚSÚ”), while the Ministry of the Interior (hereinafter referred to as “MV”) unifies procedures in the field of crisis management. Provisions of this act establish the Central Crisis Staff (hereinafter referred to as “ÚKŠ”) as a working body of the Government to deal with crisis situations (see <https://www.vlada.cz/cz/ppov/brs/pracovni-vybory/ustredni-krizovy-stab/ustredni-krizovy-stab-51792/>). The main task of the Central Crisis Staff is to coordinate the activities of ministries and other offices during crisis situation. Pursuant to the provisions of this act, the underlying obligation of ministries and other central administration authorities is to establish a crisis management site, elaborate a crisis plan, and establish a crisis staff (hereinafter referred to as the “KŠ”). This act furthermore imposes obligations upon the regional authorities and other authorities with jurisdiction on the territory of the region, determines obligations and powers of the governor, regional authority and the Fire and Rescue Service (hereinafter referred to as “HZS”) of the region and requires to establish a regional security council and regional KŠ and draw up a regional crisis plan. Similarly, the act imposes obligations upon municipalities with enlarged jurisdiction, mayors and municipal authorities.

Obligations of the State Office for Nuclear Safety, which is one of the other central administration authorities, in preparing for and dealing with extraordinary events or crisis situations arise from the provisions of Act No. 239/2000 Coll., and Act No. 240/2000 Coll., just like in case of other central administration authorities.

Other special obligations of ÚSÚ are given by provisions of Act No. 263/2016 Coll., which requires the SÚJB and the Ministry of the Interior, among other things, to draw up a National Radiation Emergency Plan. This is a plan developed for the area of the Czech Republic outside the NPP site for the preparation for management of and response to a radiation incident or radiation accident with an impact outside the emergency planning zone. The document was approved on 7 December 2020 by Resolution of the Government of the Czech Republic No. 1276 and is available at: <https://www.sujb.cz/nrhp>

A radiation accident, i.e. one of the categories of radiological emergencies, which requires the adoption of measures to protect the population, may be, in addition to an accident in a nuclear installation, an accident in radioactive material transport, explosion of a dirty bomb - i.e. explosives contaminated with radioactive material, dispersion of radioactive material from an orphan, lost or stolen radionuclide source, etc. These events can only have a local and, to the extent of damage, limited impact on both health and property of persons, which can be managed at the level of one affected region, but can also have much more significant impacts to the extent of more than one region, thus affecting even more persons with a potentially serious threat to their health. The method and extent of dealing with such events will always depend on the specific conditions, the amount, form and composition of radioactive materials released into the environment.

Furthermore, Act No. 263/2016 Coll., stipulates that, in the event of a radiation accident, the SÚJB shall receive data from the NPP operator, whose installation experienced the accident, and also has available data from obtained from the radiation situation monitoring on the territory of the Czech Republic.

The SÚJB therefore, among other things, shall issue proposals for urgent protective measures or follow-up protective measures, on the basis of the results of the radiation situation monitoring carried out, or further specify or withdraw the measures and confirm or further specify proposals for the introduction of urgent protective measures issued by licence holder;

Annex 1 includes an overview of legislation of the Czech Republic in the area of crisis management and nuclear law. In addition, it includes an overview of related international conventions and agreements. As there is a number of legally not binding regulations for this area in the Czech Republic, for the sake of completeness, these are listed in Annex 2.

A. ELEMENTS OF THE CRISIS MANAGEMENT SYSTEM IN THE EVENT OF A RADIATION EXTRAORDINARY EVENT

A.1 Overview of the crisis management system in the event of a radiation accident

In accordance with legislation, a crisis management system is established in the Czech Republic, which includes both emergency management preparedness and crisis management preparedness system for the case of crisis situations of various kinds (hereinafter referred to as “crisis preparedness”) and crisis management system. This system is also applicable to the case of a radiation accident, i.e. it is linked to response preparedness and to radiation accident response.

Figure B - 1 shows the basic scheme of the structure of crisis preparedness of the Czech Republic for the case of emergency, which also applies to the case of radiation extraordinary event response preparedness.

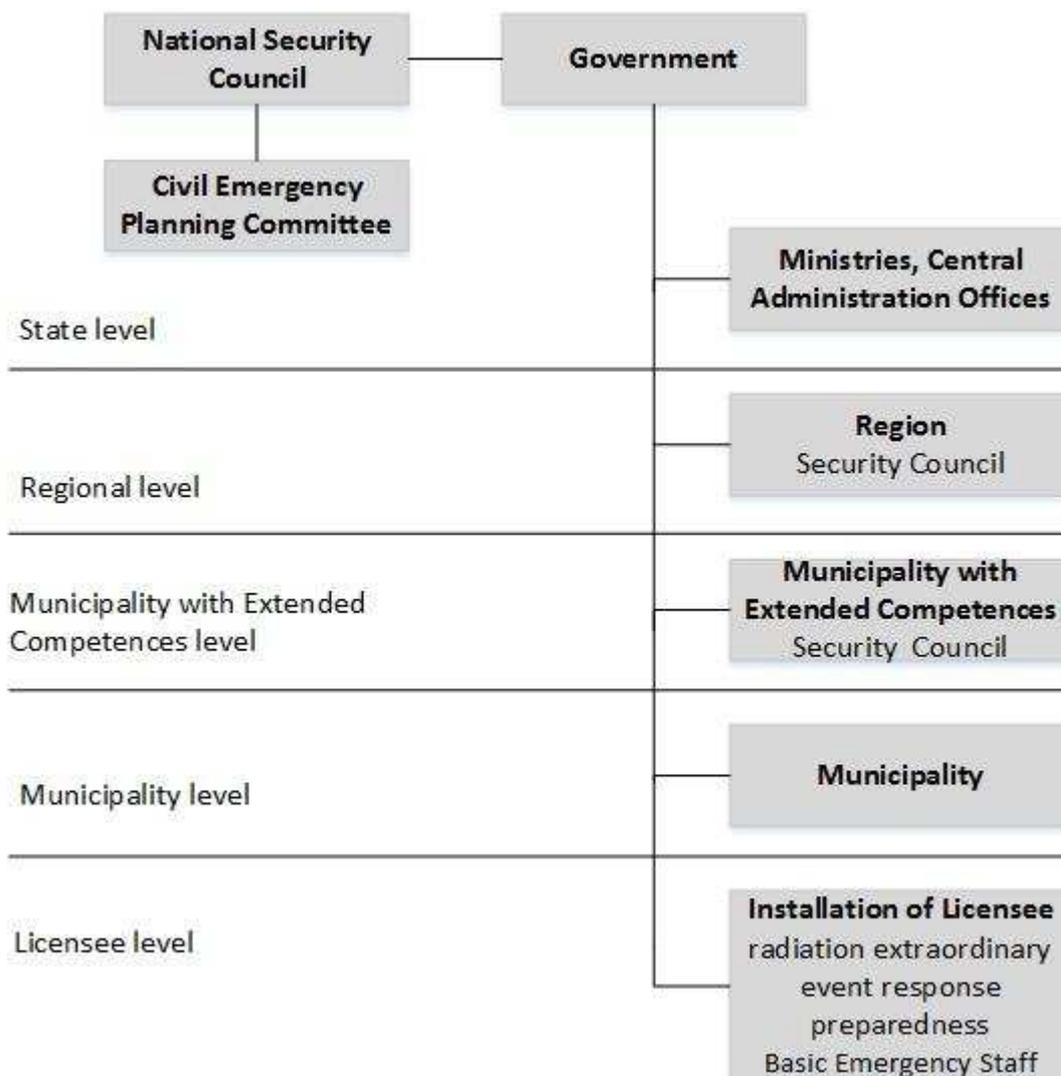


Figure B - 1 Basic scheme of the structure of crisis preparedness of the Czech Republic for the case of occurrence of radiation extraordinary event

Note: RMU – radiation extraordinary event, Basic emergency staff – emergency staff of NPP operator

For completeness, it should be noted to the above that pursuant to Act No. 263/2016 Coll.

- a) Radiation extraordinary event means an event that leads or may lead to exceeding of exposure dose limits, and requires actions to prevent the exceeding of the limits or deterioration of the situation from the standpoint of radiation protection assurance,
- b) First degree radiation extraordinary event means a radiation extraordinary event that can be handled by forces and means of the operators or shift personnel of the person whose activities gave rise to the radiation extraordinary event,
- c) Radiation incident means a radiation extraordinary event that cannot be handled by forces and means of the operators or shift personnel of the person whose activities gave rise to the radiation extraordinary event or has resulted from the finding, misuse or loss of a radionuclide source which does not require taking urgent action to protect the general public,
- d) Radiation accident means a radiation extraordinary event that cannot be handled by forces and means of the operators or shift personnel of the person whose activities gave rise to the radiation extraordinary event or has resulted from the finding, misuse or loss of a radionuclide source which requires taking urgent action to protect the general public,
- e) Radiation extraordinary event response preparedness and radiation extraordinary event response are components of radiation extraordinary event management; radiation extraordinary event management means a system of procedures and measures to ensure the analysis and assessment of a radiation extraordinary event, radiation extraordinary event response preparedness, radiation extraordinary event response and remedy of the situation after radiation accident.

The radiation situation monitoring system on the territory of the Czech Republic, the foundations of which were established in April 1986, is also an important element in ensuring the radiation extraordinary event management. The legal framework for radiation situation monitoring on the territory of the Czech Republic is created by Act No. 263/2016 Coll. The process of continuous monitoring and monitoring equipment was launched in 2001.

The SÚJB is responsible for radiation situation management and monitoring on the territory of the Czech Republic. In addition to SÚJB, administrative authorities, i.e. the Ministries of Defence, Agriculture and the Environment, the Fire and Rescue Service of the Czech Republic, the Police of the Czech Republic, the Customs Authorities of the Czech Republic and the Agricultural and Food Inspection Authority, are involved in this activity to the extent stipulated by Act No. 263/2016 Coll. The NPP operator also participates in this monitoring. The SÚJB has concluded relevant contracts or agreements with the aforementioned administrative authorities; the exception is the Ministry of the Environment, which informed the SÚJB in a letter from the minister about the organisations established by the Ministry of the Environment which should conclude the relevant agreement with the SÚJB. In the case of ministries, these contracts or agreements specify which organisation controlled or established by them will carry out the monitoring; in all other cases, they specify, among other things, the exact scope of share of the given organisation in radiation situation monitoring. This monitoring also takes place in accordance with the National Monitoring Program - see: <https://www.sujb.cz/npm>. The NPP operator performs this monitoring under its monitoring program, which is a document that is part of the relevant application for a licence for the operation of NPP, submitted to the SÚJB. This operator has thus set up teledosimetry systems in the vicinity of both NPPs, which are part of the Early Warning Network, which allows the detection of any increased level above the level corresponding to normal radiation situation. Data from this monitoring are in accordance with the requirements of Decree No. 360/2016 Coll., as well as other data from radiation situation monitoring forwarded to the SÚJB to the MonRaS system. The data are submitted also on occurrence of a radiation accident.

In addition to the continuous radiation situation monitoring, emergency exercises, drills and comparative measurements are organized, which are mainly aimed at practicing ground monitoring, or at practicing the activities of measuring laboratories.

The results of radiation situation monitoring, including the results of emergency exercises, on the territory of the Czech Republic are published by the MonRaS system continuously on the SÚJB website: <https://www.sujb.cz/monitorovani-radiacni-situace/>

A backbone system of radiation situation monitoring is the Early Warning Network, which serves for the quick identification of deviations from normal radiation situation, whether they are caused by event within or outside the territory of the Czech Republic. The measuring points of the Early Warning Network are equipped with dose rate detectors, with continual recording, and with data transfer. The Early Warning Network includes teledosimetry systems located in the vicinity of both NPPs. Continuous sampling of large volumes of air takes place at the same time at ten measuring points of the Early Warning Network, and radioactive substances are captured on the filter. Sensitive filter measurements enable to determine even trace amounts of radioactive substances in the air.

In case of a radiation accident on the territory of the Czech Republic or abroad with possible impact on the territory of the Czech Republic, the crisis situation occurred is addressed as part of the crisis management system. Figure B - 2 shows the basic scheme of the structure of crisis management system of the Czech Republic in the case of a radiation accident, or radiation incident with suspected release of radioactive materials or spread of ionising radiation.

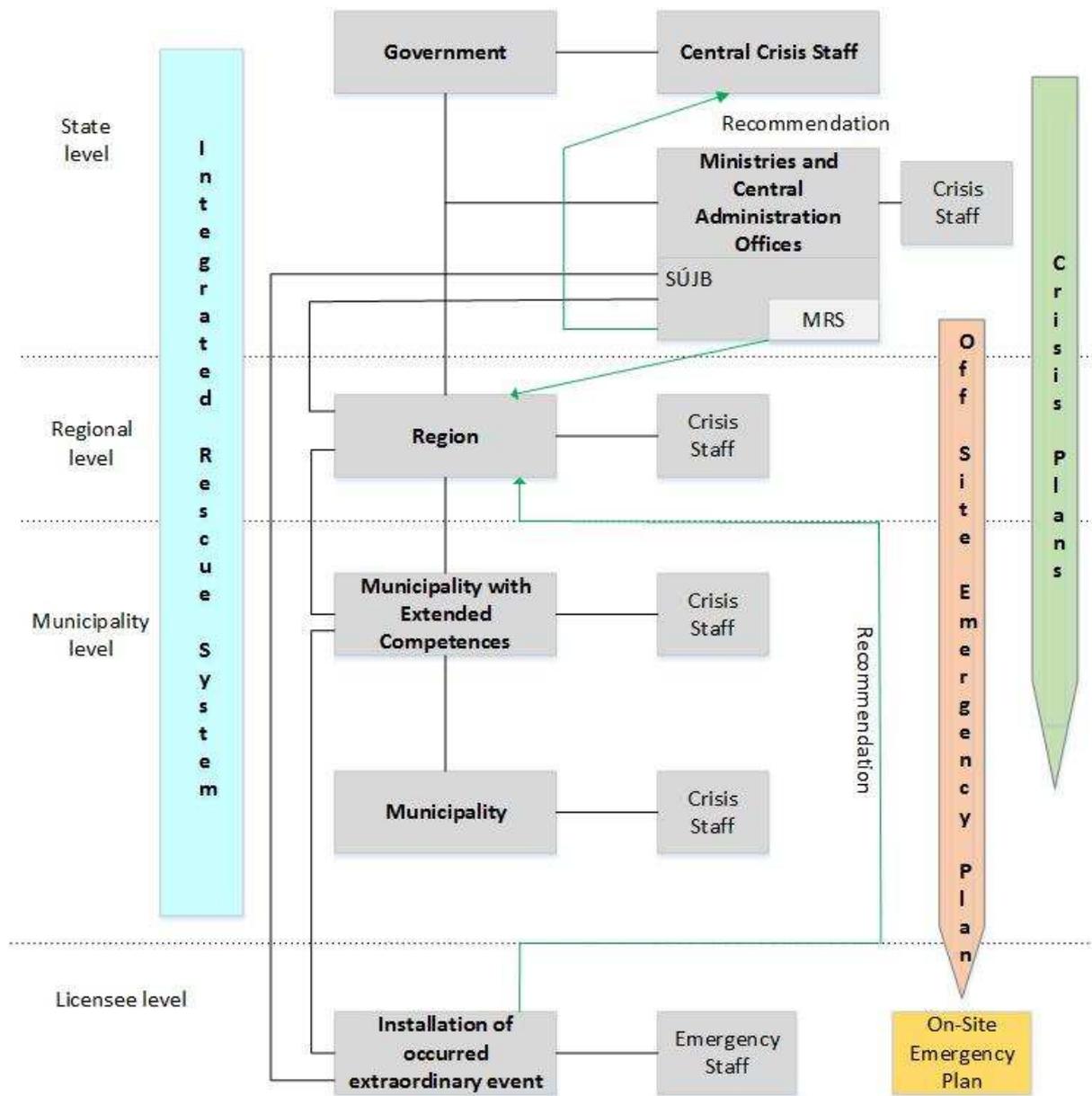


Figure B - 2 Basic scheme of the structure of crisis management system of the Czech Republic related to the occurrence of a radiation accident, or radiation incident with suspected release of radioactive materials or spread of ionising radiation

Note: Pursuant to Act 263/2016 Coll., the obligation of such communication is intended for the case of a radiation accident, or radiation incident with suspected release of radioactive materials or spread of ionising radiation

Proposal 1 – if it is a radiation accident at a nuclear installation/NPP, the operator of this installation shall submit a proposal for evacuation to the governor of the region

Proposal 2 – SÚJB shall clarify or approve the proposal for evacuation issued by the NPP operator and shall issue a proposal for the introduction, specification or withdrawal of follow-up protective measures or the withdrawal of urgent protective measures

Proposal 3 – SÚJB shall issue a proposal for the introduction, specification or withdrawal of urgent or follow-up protective measures

MRS – radiation situation monitoring, NRHP – national radiation emergency plan

For completeness, it should be noted to Figure B - 2 that the response to a radiation extraordinary event, which is related to the crisis management system, according to Act No. 263/2016 Coll., means

the application of a set of measures for the management of the situation related to the occurrence of a radiation extraordinary event with the aim of regaining control over the situation and preventing or mitigating the consequences of the radiation extraordinary event, including non-radiation consequences, or mitigating them.

In the event of a radiation accident abroad that would affect the territory of the Czech Republic, the above-mentioned crisis management system will respond either on the basis of identification of changed radiation situation indicated by the Early Warning Network, or on the basis of information concerning such accident. The response method is described in detail in the National Radiation Emergency Plan available at: <https://www.sujb.cz/nrhp>.

A.2 Responsibilities of authorities and organisations involved in the crisis preparedness system

At the central level, both crisis preparedness and crisis management controlled by the Government of the Czech Republic. The governor shall ensure the preparedness of the region for the management of crisis situations, and other regional authorities shall participate in this preparedness.

Ministries and other ÚSÚ are responsible for the coordination of crisis preparedness and crisis management in the area of their jurisdiction, following their crisis plans in the management of crisis situation and also following the national radiation emergency plan from 2023 at the latest. They cooperate with each other and they exchange information and, on request, they ensure that professional work is carried out for other central administration authorities.

The operator of a nuclear power plant and a workplace with sources of ionising radiation is responsible, among other things, for ensuring response preparedness and radiation extraordinary event response in the performance of radiation activities.

Additional details are provided for hereinafter in this sub-chapter and sub-chapter A.3.

A.2.1 National Security Council

The National Security Council is established as a standing working body of the Government for the coordination of security issues of the Czech Republic. The National Security Council comprises the Prime Minister and other members of the Government in accordance with a Government decision. The National Security Council, within the scope of authorisation set by the Government, prepares draft measures for the Government concerning the safeguarding of the Czech Republic's security. (For information please visit: <https://www.vlada.cz/cz/pracovni-a-poradni-organy-vlady/brs/brs-uvod-3851/>). The standing working bodies of the National Security Council include also the Civil Emergency Planning Committee.

A.2.2 Civil Emergency Planning Committee

The Civil Emergency Planning Committee is a standing working body of the National Security Council for the area of civil emergency planning and for the coordination and planning of measures to protect the internal security of the state. The Committee coordinates the above issues aimed at planning the measures to protect the population and economy, to protect the critical infrastructure, including measures for the case of a radiation accident, preventive measures against the use of weapons of mass destruction, including the elimination of the consequences of their use, and the harmonisation of the requirements for civil resources necessary for ensuring the security of the Czech Republic. The Chairperson of the State Office for Nuclear Safety is a member of the Committee. (For information please visit: <https://www.vlada.cz/cz/ppov/brs/pracovni-vybory/civilni-nouzove-planovani/vybor-pro-civilni-nouzove-planovani-109279/>)

A.2.3 Central Crisis Staff

The Central Crisis Staff is a working body of the Government that is responsible for crisis management, including situation management following a nuclear accident. The Chairman of the Central Crisis Staff is either the Minister of the Interior or the Minister of Defence depending on the nature of crisis situation. The main task of the Central Crisis Staff is to coordinate activities of the ministries and other central administration authorities in crisis management. The roles and competence of the Central Crisis Staff are specified in its Statute. (For more information please visit: <https://www.vlada.cz/cz/ppov/brs/pracovni-vybory/ustredni-krizovy-stab/ustredni-krizovy-stab-51792/>). The Central Crisis Staff is activated not only in the case of a radiation accident on the territory of the Czech Republic but also in the case of radiation accidents at nuclear installations outside the territory of the Czech Republic with the possibility of extending to the territory of the Czech Republic.

A.2.4 Ministries and Other Central Administration Authorities

In the scope of their competences pursuant to crisis legislation, the ministries and other central administration authorities (which include SÚJB) in the preparation for extraordinary events, in the performance of rescue and remedial work and in the protection of the population shall:

- a) Keep an overview of possible sources of risks, carry out threat analyses and, within the prevention pursuant to special legal regulations, rectify the facts and situations, which could cause occurrence of an extraordinary situation,
- b) Decide on activities to carry out rescue and remedy works and to mitigate their consequences, unless otherwise specified by special legal regulation,
- c) Organize immediate repairs of necessary public facilities for the protection of the population.

To ensure the preparedness for crisis management, the ministries and other central administration authorities, in the scope of their competences shall:

- a) Establish Crisis Management Workplace,
- b) Draw up a crisis plan; the crisis plan is subject to the approval by the minister or by the head of another central administration authority,
- c) Establish Crisis Staff as a working body to prepare for crisis situations and for crisis management, whose composition and tasks shall be defined and material, organisational and administrative conditions for its activity shall be ensured by the minister or by the head of another central administration authorities.

Pursuant to Act No. 263/2016 Coll., the ministries, the Fire and Rescue Service of the Czech Republic, the regional authority and municipal authority of a municipality with enlarged jurisdiction to ensure protective measures in the scope of their competences shall:

- a) Submit to the SÚJB and the Ministry of the Interior the inputs to draw up or update the national radiation emergency plan and, after its approval, practice and act according to the national radiation emergency plan,
- b) Methodically manage and control subordinate workplaces and unify their procedures in drawing up partial plans for specific activities under the off-site emergency plan,

A.2.5 Ministry of the Interior

Pursuant to Act No. 263/2016 Coll., the Ministry of the Interior shall cooperate with the SÚJB to draw up the national radiation emergency plan.

A.2.6 Ministry of Health

Pursuant to Act No. 263/2016 Coll., the Ministry of Health shall, among other things:

- a) Develop the system of special medical care provided by selected clinics to natural persons exposed in a radiation extraordinary event,
- b) Designate the providers of health services for the provision of care to natural persons exposed in a radiation extraordinary event and makes public a list of these providers in the Bulletin of the Ministry of Health in a manner enabling remote access,

Based on the above-mentioned obligation and in accordance with the provisions of Article 51, paragraph 3 of the Council Directive No. 96/29/EURATOM, the Ministry of Health established centres of specialised healthcare for persons exposed in radiation accidents (hereinafter referred to as "SSZP"). SSZP were published by the Ministry of Health in Journal No. 5/2013 in September 2013 and the following are established:

- a) In the Královské Vinohrady Teaching Hospital; the Burn Clinic; Šrobárova 50, 100 34 Prague 10 – Vinohrady,
- b) In the General Faculty Hospital in Prague, the Clinic of Dermatology and Venerology; U Nemocnice 2, 128 08 Prague 2 Nové Město,
- c) In the Faculty Hospital in Hradec Králové, the Internal Clinic of Haematology and Oncology, Sokolská 581, 500 05 Hradec Králové
- d) In the Thomayer Hospital, Department of Medical Genetics, Vídeňská 800, 140 59 Prague 4 – Krč,
- e) In the University Hospital Brno, the Clinic of Dermato-venerology, Jihlavská 20, 625 00 Brno.

Within the field of competence, the centres of specialised healthcare for persons exposed as a result of radiation accidents are methodological centre for problems related to healthcare for exposed persons and provide consultations and lectures to other healthcare providers in the scope of their specialisation.

A.2.7 Ministry of Defence

Pursuant to Act No. 263/2016 Coll., the Ministry of Defence participates, among other things, in radiation situation monitoring and carries out this monitoring on monitoring routes and sites.

A.2.8 Ministry of Agriculture

Pursuant to Act No. 263/2016 Coll., the Ministry of Agriculture, among other things, participates in radiation situation monitoring, carries out monitoring at monitoring sites and ensures the operation of the measuring laboratory.

A.2.9 Ministry of the Environment and Environmental Authorities

Pursuant to Act No. 263/2016 Coll., the Ministry of the Environment participates particularly in radiation situation monitoring and carries out monitoring at monitoring sites, including monitoring of meteorological situation, forecasts of its development and the way of spreading of the released radionuclides in emergency monitoring, and ensures the operation of the measuring laboratory.

The environmental authorities, among other things:

- a) Define the possible extent of the threat to small water sources of drinking water,
- b) Define the extent of the spread of contaminated surface waters,
- c) Are responsible for monitoring of watercourses and water sources, and for the measures adopted,
- d) Organize alternative supply of drinking water,
- e) Provide meteorological services.

A.2.10 Customs Authorities of the Czech Republic

The Customs Authorities of the Czech Republic participate in radiation situation monitoring and carry out monitoring on monitoring routes and sites.

A.2.11 Agricultural and Food Inspection Authority

The Agricultural and Food Inspection Authority participates in radiation situation monitoring and carries out monitoring at monitoring sites.

A.2.12 Integrated Rescue System

The Integrated Rescue System is established for the purpose of coordinated management and solution of extraordinary situations, without detailed specification whether it is an industrial accident, floods, earthquake or other natural disaster. The Integrated Rescue System is an effective system of links, rules of cooperation and coordination of rescue and security components, national and local authorities, natural and legal persons in the joint execution of rescue and rescue and remedial work and preparation for emergencies. The Integrated Rescue System shall be used in preparation for an emergency and when simultaneous rescue and remedial work needs to be carried out by two or more components of the Integrated Rescue System.

A.2.12.1 Basic Components of the Integrated Rescue System

The basic components of the Integrated Rescue System are the backbone of the system because they ensure round-the-clock duty for the receipt of announcement of an extraordinary event (emergency phone numbers 150, 155, 158, 112), ensure the evaluation of an extraordinary event and immediate intervention in the place of an extraordinary event (for this purpose, the basic components of the Integrated Rescue System deploy their forces and means throughout the Czech Republic). The basic components of the Integrated Rescue System are: Fire and Rescue Service of the Czech Republic and fire protection units included to cover the territory of the region, as well as Police of the Czech Republic and providers of emergency medical services.

A.2.12.2 Other Components of the Integrated Rescue System

Other components of the Integrated Rescue System provide planned assistance in rescue and rescue and remedial work on request under concluded agreements. Other components of the Integrated Rescue System, which may be used to carry out rescue and remedy works, are as follows:

- a) Earmarked forces and means of the armed forces (Armed Forces of the Czech Republic),
- b) Armed security forces (except for the Police of the Czech Republic),
- c) Other rescue forces (except for the Fire and Rescue Service of the Czech Republic),
- d) Public health authorities (e.g. hygiene authorities); during crisis situations, providers of acute inpatient care who have established an urgent reception also become other components of the Integrated Rescue System,
- e) Emergency, on-call, special and other services (which include radiation situation monitoring managed by SÚJB),
- f) Civil protection mechanism,
- g) Non-profit organisations and citizens' associations.

Another component of the Integrated Rescue System, which enters into an agreement on the planned assistance on request with the Fire and Rescue Service of the Czech Republic, is included, together with the basic components, into a regional alarm plan of the Integrated Rescue System or into a central alarm plan. The alarm plan of the Integrated Rescue System of the region is kept at the territorially competent Operational and Information Centre (hereinafter referred to as "OPIS") of the Fire and Rescue Service of the region and contains: contact information of the basic and other components of the

Integrated Rescue System; an overview of the forces and means of the other components of the Integrated Rescue System; method for calling and notifying the main components of the Integrated Rescue System and other posts and authorities. A central alarm plan of the Integrated Rescue System is developed at the national level (the plan is available at: <https://www.hzscr.cz/clanek/dokumentace-izs-587832.aspx?q=Y2hudW09Ng%3D%3D>), to be used if needed due to an extraordinary event or crisis situation or security action and if all conditions defined by law for the central coordination of rescue and remedy works are met or if the governor of the region, the mayor of the municipality with enlarged jurisdiction, the director of Regional Fire and Rescue Service or the leader of the intervention team through the Operation Information Centre of the Fire and Rescue Service of the region ask for assistance and for forces and means, which are not available to the components of the Integrated Rescue System at regional level for carrying out rescue and remedy works in extraordinary event managed independently in the competent region. Forces and means in central coordination of rescue and remedy works are called and deployed by the Ministry of the Interior – General Directorate of Fire and Rescue Service of the Czech Republic through its Operation Information Centre.

The coordination of components of the Integrated Rescue System during joint intervention is carried out at the tactical, operational and strategic levels. At the tactical level, the coordination of the components of the Integrated Rescue System is carried out by the leader of the emergency team, who is the commander of fire protection unit or the competent official of the Fire and Rescue Service with the right of privileged leadership, who, through the Operation Information Centre of the Fire and Rescue Service of the region, calls additional forces and means of the components of the Integrated Rescue System and specialised units. If necessary, the leader of the emergency team establishes staff of the leader of the emergency team, usually with the representatives of the components of the Integrated Rescue System and the representatives of specialised departments, who, in the case of a radiation extraordinary event, are the representatives of SÚJB or the National Radiation Protection Institute (hereinafter referred to as “SÚRO”).

At the operational level of the leadership, the competent local Operation Information Centre of the Regional Fire and Rescue Service cooperates with Operation Information Centre of the Ministry of the Interior – General Directorate of Fire and Rescue Service of the Czech Republic, operation centres of basic components of the Integrated Rescue System, crisis staff of SÚJB and control centres of specialised departments.

The coordination of the components of the Integrated Rescue System at the strategic level is carried out by the mayor of the municipality with enlarged jurisdiction, the governor of the region and, in Prague, the mayor of the capital city of Prague or the Ministry of the Interior. As the working body for crisis management, the governor shall establish the crisis staff of the region and the mayor of the municipality with enlarged jurisdiction shall establish the crisis staff of the municipality with enlarged jurisdiction.

Emergency management shall include rescue and remedial work and the components of the Integrated Rescue System shall follow the prepared planning documentation (in particular crisis and emergency plans).

A.2.13 Fire and Rescue Service of the Czech Republic

Pursuant to Act No. 263/2016 Coll., the Fire and Rescue Service of the Czech Republic shall

- a)** Participate in radiation situation monitoring and carry out monitoring on monitoring routes and sites,
- b)** Lay down the conditions for fire protection of nuclear installation,
- c)** Provide, within the scope of its jurisdiction set out by other legislation, in the event of a radiation accident, preliminary information to the affected population about the applicable measures to protect the general public and about the steps to be taken in the event of such a situation; the preliminary information provided shall be up-to-date and constantly available

and it shall be provided automatically and repeatedly, at regular intervals and whenever a significant change occurs,

- d) in the event of a radiation incident or radiation accident, within the scope of its jurisdiction set out by other legislation, immediately inform the population affected by this radiation extraordinary event about
 - 1. the facts of radiation incident or radiation accident,
 - 2. the steps to be taken, and
 - 3. the measures to protect the population to be taken, if necessary,
- e) Cooperate in providing information pursuant to letter d) with the governor of the region and the municipal authority of the municipality with enlarged jurisdiction, if it is a radiation incident associated with the suspicion of possible leak of radioactive materials or the spread of ionising radiation from the premises of a nuclear installation or a workplace with a source of ionising radiation, or about the radiation accident,
- f) Draw up an off-site emergency plan,
- g) Cooperate with the licence holder and the competent regional authority to provide the population in the emergency planning zone with antidotes for iodine prophylaxis.

Following the above, specifically in the event of a radiation accident at a nuclear power plant located on the territory of the Czech Republic and on the basis of an instruction from the nuclear power plant, the Fire and Rescue Service of the Czech Republic shall ensure the warning of the population in the emergency planning zone by means of sirens operated via uniform warning and notification system. Furthermore, the Fire and Rescue Service shall ensure the relevant radio and TV broadcastings through the Czech Television and the Czech Radio. For this case, the competent Regional Fire and Rescue Service shall ensure also the notification of the concerned municipalities with enlarged jurisdiction through Operation Information Centres of the Regional Fire and Rescue Service.

Pursuant to crisis legislation, the Operation Information Centres of the Regional Fire and Rescue Service shall:

- a) Receive and verify the notification at NPP,
- b) Notify the governor of the region, inform the mayors of the municipalities with enlarged jurisdiction,
- c) Convene the competent crisis staff as necessary,
- d) Notify the Joint Operation Centre of the Ministry of Defence through the Operation Information Centre of the Ministry of the Interior - General Directorate of the Fire and Rescue Service of the Czech Republic and the Integrated Operation Centre of the Regional Directorate of Police of the Czech Republic,
- e) Ensure activities according to the alarm plan.

Ministry of the Interior – General Directorate of Fire and Rescue Service of the Czech Republic

The Ministry of the Interior – General Directorate of Fire and Rescue Service of the Czech Republic performs tasks in the area of:

- a) Preparation for extraordinary events, Integrated Rescue System and protection of the population,
- b) Involvement of the Czech Republic in international rescue operations during extraordinary events abroad and provision of humanitarian aid abroad in cooperation with the Ministry of Foreign Affairs.

To accomplish the above listed tasks, the Ministry of the Interior – General Directorate of Fire and Rescue Service of the Czech Republic:

- a) Unifies procedures of ministries, central administration authorities, regional authorities, municipal authorities, legal persons and natural persons carrying out business activities,
- b) Regulates the Integrated Rescue System,
- c) Reviews and coordinates alarm plans of the Integrated Rescue System of regions and elaborates a central alarm plan of the Integrated Rescue System,
- d) Manages the construction and operation of information and communication networks and services of the Integrated Rescue System,
- e) Draws up the concept of protection of the population,
- f) Provides and operates a uniform system of warning and notification, defines the method for informing legal and natural persons on the nature of potential threat, prepared measures, and method and time for their implementation,
- g) Organizes briefing and training in the area of protection of the population and for the preparedness of components of the Integrated Rescue System aimed at their mutual collaboration; sets up educational establishments for this purpose,
- h) Ensures central coordination of rescue and remedy works, if:
 - 1. An extraordinary event extends beyond the national border of the Czech Republic and the coordination of rescue and remedy works beyond the frontier traffic is required, or
 - 2. An extraordinary event extends beyond the territory of the region and the leader of the intervention team declared the maximum level of alarm, or this coordination is required by the leader of the intervention team, mayor of the municipality with enlarged jurisdiction or governor of the region,
- i) Organizes rescue and material aid abroad in cooperation with the Ministry of Foreign Affairs, components of the Integrated Rescue System or central administration authorities,
- j) In accordance with the international treaties, which are binding upon the Czech Republic, ensures continuously the function of contact point to request humanitarian aid abroad by affected country or by international organisation; or the notification of serious extraordinary event abroad, which may also affect the territory of the Czech Republic,
- k) Informs the competent international organisations on forces and means of the Czech Republic predetermined for the provision of humanitarian aid abroad.

Regional Fire and Rescue Service

Pursuant to crisis legislation, the Regional Fire and Rescue Service, among other things:

- a) Is responsible for the management of the construction and operation of information and communication networks and services of the Integrated Rescue System,
- b) Organizes briefing and training in the area of protection of the population,
- c) Ensures warning and notification,
- d) Coordinates rescue and remedial work and performs tasks in carrying out rescue and remedial works assigned by the Ministry of the Interior,
- e) Draws up a regional alarm plan of the Integrated Rescue System,
- f) Organizes identification and marking of dangerous areas, decontamination and other protective measures,
- g) Draws up an off-site emergency plan,
- h) Organizes and coordinates the evacuation, and sheltering of exposed population, emergency accommodation, emergency supply of drinking water, foods as well as clothing, shoes, hygiene products, etc.,
- i) Organizes the management of civil defence material,
- j) Keeps an overview of forces and means earmarked for the remedy of consequences of emergency and for the decontamination of persons, transportation means and materials exported from the affected area,
- k) Uses the fire protection units to decontaminate persons and transportation means,

- l) Participates in measures adopted to remedy the consequences of emergency (deployment directly at NPP).

A.2.14 Police of the Czech Republic

Pursuant to crisis legislation, the Police of the Czech Republic, among other things:

- a) Draws up a plan for regulation of the movement of persons and vehicles,
- b) Draws up a plan for ensuring public order and security,
- c) Earmarks forces and means to ensure the regulation of the movement of persons and vehicles, and to ensure public order,
- d) Is responsible for measures to ensure peace and order in the emergency planning zone and in the places of receipt of evacuated population,
- e) Is responsible for measures to ensure the protection of property in the emergency planning zone.

In the case of illegal or criminal handling of ionising radiation sources, the Police of the Czech Republic plays a key role in dealing with the event.

Pursuant to Act No. 263/2016 Coll., the Police of the Czech Republic, among other things:

- a) Participates in radiation situation monitoring,
- b) Performs monitoring on monitoring routes and sites,
- c) Ensures emergency protection of nuclear installations.

A.2.15 State Office for Nuclear Safety

The State Office for Nuclear Safety is a central state administration body in the field of use of nuclear energy and ionising radiation and pursuant to Act No. 263/2016 Coll., in particular, the Office shall:

- a) Draw up the national monitoring program and, after its approval, forward it to the persons involved in radiation situation monitoring in the Czech Republic,
- b) Manage and monitor the radiation situation on the territory of the Czech Republic,
- c) Ensure and conduct drills and emergency exercises for radiation extraordinary event response,
- d) Draw up, in cooperation with the Ministry of the Interior, the national radiation emergency plan,
- e) Provide preliminary information to the general population in case of radiation accident about the protective actions and steps to be taken to ensure radiation protection,
- f) Issue proposals for urgent protective actions or follow-up protective actions, in accordance with the national radiation emergency plan and on the basis of the results of the radiation situation monitoring carried out, or to further specify or withdraw the action and to confirm or further specify proposals for the introduction of urgent protective action issued by licence holder (i.e. NPP operator),
- g) Ensure information of the general public about the occurrence and the course of a radiation accident which has an impact on the territory of the Czech Republic outside an emergency planning zone and about the steps and measures to be taken during the various stages of development of the radiation accident, unless this information is being provided by another administrative authority,
- h) Participate, within the scope of its competence, in the provision of information about the occurrence and the course of a radiation accident within an emergency planning zone,
- i) Ensure notification of the competent supervisory authorities of the neighbouring Member States of Euratom of the occurrence and development of radiation accident, which has an impact on the territory of the Czech Republic,

- j) Ensure that an international peer review is invited immediately in the case of a radiation accident that has occurred in the territory of the Czech Republic and led to the implementation of protective measures outside a nuclear installation grounds,
- k) Provide information about the adoption of measures to protect the general public in the Czech Republic in the event of a radiation accident arisen in the territory of Member States of the Euratom to the European Commission and other Member States of the Euratom which may be affected by these measures and, in accordance with the Czech Republic's international commitments, provide public access to information thus obtained,
- l) Ensure notification of regional authorities about the occurrence and the course of a radiation accident outside the territory of the Czech Republic and about the steps and measures to be taken in the course of the radiation extraordinary event.

As mentioned above, the SÚJB shall issue proposals for urgent protective measures or follow-up protective measures. These proposals shall be drawn up by the crisis staff of SÚJB, which, in the case of a radiation accident on the territory of the Czech Republic, shall use information obtained from the affected nuclear installation. The crisis staff of SÚJB shall carry out work as part of the response to the radiation accident, or the radiation incident, with the support of SÚRO and the National Institute for Nuclear, Chemical and Biological Protection (hereinafter referred to as "SÚJCHBO").

An important tool of SÚJB is the monitoring of radiation situation, the outputs of which are used by the crisis staff of SÚJB in drawing up proposals for the introduction of protective measures. In addition, SÚJB shall prepare the proposals with the use of the ESTE software to calculate the consequences of release of radioactive substances. In the management of radiation accident or radiation incident, the SÚJB shall forward information about the radiation situation to other crisis management bodies.

After receiving notification of a radiation accident or radiation incident, the SÚJB shall activate its crisis staff. Members of the crisis staff shall arrive at the workplace of crisis staff immediately, no later than 120 minutes after notification. Next steps of the SÚJB in the event of a radiation accident are referred to in the national radiation emergency plan (see <https://www.sujb.cz/nrhp>).

A.2.16 Regional Authority and Governor of the Region

Pursuant to crisis legislation, the regional authority shall:

- a) Organize collaboration between the municipal authorities of municipalities with enlarged jurisdiction and other administration authorities and municipalities in the region, particularly in drawing up an alarm plan of the Integrated Rescue System, ensure emergency preparedness and verify it through exercises,
- b) Regulate the Integrated Rescue System at regional level,
- c) Unify procedures of municipal authorities of municipalities with enlarged jurisdiction and local administration authorities with regional jurisdiction in the area of protection of the population,
- d) Draw up the regional emergency plan,
- e) Conclude agreements with the relevant local unit of a neighbouring state, unless otherwise specified by an international treaty approved by the Parliament of the Czech Republic and published in the Collection of Laws or in the Collection of International Treaties,
- f) Draw up the regional alarm plan of the Integrated Rescue System (see: <https://www.hzscr.cz/clanek/dokumentace-izs-587832.aspx?q=Y2hudW09Ng%3d%3d>).

If the emergency planning zone extends to the territory of more than one administrative district of the municipality with enlarged jurisdiction of own region or extends to the territory of the region from the territory of another region, the regional authority, in cooperation with the municipal authorities concerned of the municipalities with enlarged jurisdiction, shall draw up the off-site emergency plan. These tasks of the regional authority are performed by the Regional Fire and Rescue Service.

The coordinating regional authority shall

- a) Coordinate and directs the creation of the warning and notification system in the emergency planning zone,
- b) Coordinate the interdependence of measures according to on- and off-site emergency plan.
- c) Control and evaluate the state of preparedness of forces and means earmarked for the implementation of measures according to the off-site emergency plan,
- d) Coordinate and control the preparation of the population for the case of a radiation extraordinary event.

The regional authority or the coordinating regional authority thus ensures the coordination of crisis preparedness of all municipalities with enlarged jurisdiction, the territory of which extends to the emergency planning zone. The governor of the competent region, in cooperation with the mayors of the affected municipalities with enlarged jurisdiction, shall manage all activities related to crisis preparedness in the entire emergency planning zone.

In emergency management, the regional authority shall implement the necessary measures. The regional authority shall follow its crisis plan, relevant emergency plans and, if there is an emergency planning zone of NPP located on its territory, according to the relevant off-site emergency plan. From 2023, it will also proceed according to the national radiation emergency plan. To ensure emergency response, the regional authority shall unify procedures of municipal authorities of municipalities with enlarged jurisdiction and local administration offices with regional jurisdiction and regulate the Integrated Rescue System.

Pursuant to Act No. 263/2016 Coll., the regional authority shall, in particular:

- a) Cooperate with the NPP operator and the Fire and Rescue Service of the Czech Republic to provide the population in the emergency planning zone with antidotes for iodine prophylaxis,
- b) In the scope of its jurisdiction set out by other legislation, provide preliminary information to the general public in the emergency planning zone in the event of a radiation accident about the measures to protect the general public, which apply to the general public and about the steps to be taken in the case of such situation.

Pursuant to crisis legislation, the governor of the competent region shall

- a) In cooperation with the mayors of the affected municipalities with enlarged jurisdiction, manage all activities related to crisis preparedness in the entire emergency planning zone,
- b) Have the crisis staff of the region available as the working body,
- c) Receive and verify the notification with the Operation Information Centre of the Regional Fire and Rescue Service,
- d) Issue instructions to submit information or, where appropriate, to call the crisis staff,
- e) Depending on the situation, activate forces and means,
- f) Decide on announcement and implementation of measures to protect the population; issue proposals for urgent protective measures or subsequent protective measures or their specification and/or repeal and confirm to the SÚJB, which also specifies to the governor the proposal for the introduction of urgent protective measures issued by the licence holder,
- g) Coordinate the activities of bodies and organisations taking part in emergency management on the territory of the region, coordinates rescue and remedy works, and takes decisions according to the recommendations from ÚSÚ.

Pursuant to Act No. 263/2016 Coll., the governor of the region shall:

- a) In the event of a radiation incident associated with the suspicion of potential leak of radioactive materials or the spread of ionising radiation from the premises of a nuclear installation or a workplace with a source of ionising radiation or a radiation accident on the territory of the region within the scope of its jurisdiction set out by other legislation, immediately inform the population affected by this radiation extraordinary event about

1. the facts of radiation incident or radiation accident,
 2. the steps to be taken, and
 3. the measures to protect the population to be taken, if necessary,
- b) Cooperate with the Fire and Rescue Service of the Czech Republic and the municipal authority of the municipality with enlarged jurisdiction in providing information under letter a),
 - c) Approve the off-site emergency plan.

In the event of a radiation extraordinary event, the governor of the region decides on announcement and implementation of measures to protect the population. The governor of the region has the crisis staff of the region available as the working body. For the announcement of protective measures, proposals for the introduction of urgent protective measures from the operator of NPP which experienced the radiation accident and the SÚJB are available to the governor; the governor shall decide when and what protective measures will be taken, considering the actual situation in the territory of the region. On the basis of proposals, recommendations and decisions by the competent regional authorities, the competent municipalities with enlarged jurisdiction ensure a coordinated procedure for rescue and remedy works. During a radiation accident, some protective measures may be specified or, where appropriate, imposed in another area. To impose the individual protective measures, the governor of the region or the mayor of the municipality with enlarged jurisdiction uses specific activity plans, which form a part of the off-site emergency plan.

Figure B - 2 shows the way of how the NPP operator communicates with external authorities and organisations both at national and at local levels in the event of a radiation accident, or radiation incident with the suspicion of potential leak of radioactive materials or the spread of ionising radiation, and its subsequent management.

A.2.17 Regional Security Council

In accordance with crisis legislation, the Regional Security Council shall particularly consider and assess the following:

- a) Overview of possible sources of risks and threat analysis,
- b) Regional crisis plan,
- c) Regional emergency plan,
- d) Regional off-site emergency plan, if approved by the governor of the region,
- e) Financial means of preparedness of the region and components of the Integrated Rescue System for crisis situations and management on the territory of the region,
- f) Draft agreements with local units of a neighbouring state on cooperation with other regions in crisis management and in provision of aid,
- g) State of preparedness of the components of the Integrated Rescue System in the region,
- h) Final report on evaluation of crisis situation in the region,
- i) Draft annual plans for exercises of the components of the Integrated Rescue System and crisis management bodies in the region.

A.2.18 Municipality with Enlarged Jurisdiction

In accordance with crisis legislation, the municipality with enlarged jurisdiction shall, in particular:

- a) Perform tasks in carrying out rescue and remedial works assigned by the Ministry of the Interior,
- b) Organize collaboration between municipal authority of the municipality with enlarged jurisdiction and local administration authorities with jurisdiction in its administrative district and other municipalities,
- c) Inform other municipalities, legal and natural persons in its administrative district about the nature of possible threat to the population and about prepared rescue and remedial works,

- d) Cooperate on the drawing-up of the off-site emergency plan and on coordinated management of an extraordinary event with the regional authority, if the emergency planning zone extends beyond the territory of the administrative district of the municipality with enlarged jurisdiction,
- e) Ensure crisis preparedness defined by the regional emergency plan and by the off-site emergency plans, and verify it through exercises.

The mayors of the affected municipalities with enlarged jurisdiction shall decide on the convocation of the crisis staff of the municipality with enlarged jurisdiction and manage the announcement and implementation of protective measures in the affected territory of the municipality with enlarged jurisdiction. These activities are managed on the basis of the off-site emergency plan. The protective measures shall be announced after prior discussion with the regional crisis staff, which shall ensure mutual coordination of reports and information exchanged between the region, individual municipalities with enlarged jurisdiction or, where appropriate, SÚJB and NPP. This procedure serves to ensure the coherence of the announced protective measures on the area falling under the administration of individual municipalities with enlarged jurisdiction.

Mayor of the municipality authority with enlarged jurisdiction shall

- a) Receive and verify the notification with the competent Operation Information Centre of the Regional Fire and Rescue Service,
- b) Issue instructions to submit information or, where appropriate, to call the crisis staff,
- c) Evaluate the situation and prepare decisions to adopt protective measures, and activate forces and means depending on the situation.

Pursuant to Act No. 263/2016 Coll., the municipality with enlarged jurisdiction shall

- a) In the event of a radiation incident associated with the suspicion of potential leak of radioactive materials or the spread of ionising radiation from the premises of a nuclear installation or a workplace with a source of ionising radiation or a radiation accident on the territory of the municipality within the scope of its jurisdiction set out by other legislation, immediately inform the population affected by this radiation extraordinary event about
 - 1. the facts of radiation incident or radiation accident,
 - 2. the steps to be taken, and
 - 3. the measures to protect the population to be taken, if necessary,
- b) Cooperate with the Fire and Rescue Service of the Czech Republic and the governor of the region in providing information under letter a),

A.2.19 Security Council of the Municipality with Enlarged Jurisdiction

In accordance with crisis legislation, the security council of the municipality with enlarged jurisdiction shall, among other things, consider and assess the following:

- a) Overview of possible sources of risks and threat analysis,
- b) Crisis plan of the municipality with enlarged jurisdiction,
- c) Off-site emergency plan, if approved by the mayor of the municipality with enlarged jurisdiction,
- d) Final report on evaluation of crisis situation within the administrative district of the municipality with enlarged jurisdiction,
- e) State of preparedness of the components of the Integrated Rescue System deployed within the administrative district of the municipality with enlarged jurisdiction,
- f) Method for informing municipalities, legal and natural persons about the nature of possible threat in the administrative district of the municipality with enlarged jurisdiction, about prepared crisis measures and about the method of their implementation.

A.2.20 Municipal Authority

Pursuant to crisis legislation, the municipal authority shall, in particular:

- a) Organize preparedness of the municipality for emergency,
- b) Participate in rescue and remedial work with the Integrated Rescue System,
- c) Ensure warning, evacuation and sheltering of persons from imminent danger, unless otherwise set out by special legislation,
- d) Provide the Fire and Rescue Service with documents and information necessary for drawing up a regional emergency plan or off-site emergency plan,
- e) Participate in ensuring emergency survival of inhabitants of the municipality,
- f) Inform legal and natural persons in the municipality about the nature of possible threat, about prepared rescue and remedial works, and about the protection of the population. To this end, it shall organize their training.

A.3 Operator of NPP or Workplace with Sources of Ionising Radiation

The operator of NPP or workplace with sources of ionising radiation shall ensure the radiation extraordinary event response preparedness of its nuclear installation or workplace with sources of ionising radiation in accordance with Act No. 263/2016 Coll. In the event of a radiation extraordinary event at the NPP operated by the operator or at the workplace, the operator shall also ensure the response to this event.

A.3.1 Ensuring Radiation Extraordinary Event Response Preparedness of NPP or Workplace with Sources of Ionising Radiation

As part of the obligation to ensure radiation extraordinary event response preparedness, the operator shall, among other things:

- a) Draw up the on-site emergency plan and intervention instructions,
- b) Provide a system of education on radiation extraordinary event management for the natural persons concerned with the intervention instructions or the on-site emergency plan,
- c) Regularly verify the radiation extraordinary event response preparedness through training, emergency exercise and verification of the functionality of technical equipment according to the on-site emergency plan and intervention instructions.

The NPP operator, shall among other things:

- a) Cooperate with national and local authorities and with the emergency teams of the Integrated Rescue System to ensure radiation extraordinary event response preparedness in the case of a radiation accident in the emergency planning zone,
- b) In cooperation with the competent regional authority or the Fire and Rescue Service of the Czech Republic, ensure that the general public and the integrated rescue system units intervening in radiation accident in the emergency planning zone are provided with iodine prophylaxis antidotes,
- c) Provide the population in the emergency planning zone with basic information in the event of a radiation accident and regularly update this information,
- d) Provide for a system of notification of the authorities concerned,
- e) Acquire, maintain and operate warning system terminals in the emergency planning zone,
- f) Verify, by means of exercises and tactical exercises in cooperation with the competent public administration authorities and integrated rescue system units, the accuracy, efficiency and mutual consistency between on-site and off-site emergency plans and their consistency with the national radiation extraordinary event plan.

To implement an effective response to a radiation emergency, the NPP operator shall establish an emergency response organisation, which is composed of an on-call duty emergency response organisation and internal on-call duty emergency response organisation (see **Chyba! Nenalezen zdroj odkazů.**).

On-call Duty Emergency Response Organisation

The on-call duty emergency response organisation (hereinafter referred to as “POHO”) – see **Chyba! Nenalezen zdroj odkazů.**, consists of emergency support centre personnel who are on weekly continuous on-call duty. The POHO members are on-call so that within 20 minutes during working hours and within 1 hour during off-working hours from the announcement of a radiation extraordinary event, the respective experts are in attendance at NPP to the emergency control centre. Means for activation of POHO personnel are backed up.

Response during the origination of a radiation extraordinary event at NPP is always ensured in the first phase of the development of a radiation extraordinary event by continuous shift personnel (IOHO – internal emergency response organisation), under the control of the shift engineer (SI). In cases where the event is, by its scope, outside the framework of the capacities of continuous shift personnel, IOER is completed by employees who are on on-call duty within the emergency response organisation (POHO - on-call duty emergency response organisation). In this case, the Head of Emergency Response Board takes over responsibility for managing the response after mobilization of Emergency Response Board from the Shift Engineer.

Internal Emergency Response Organisation (IOHO)

The IOHO consists solely of shift personnel, i.e. employees, who ensure normal operation of NPP. The continuous shift personnel ensure all activities according to the instructions from the shift engineer, relating to eliminating any signs of occurring radiation extraordinary event until the activation of employees who are on continuous on-call duty within the organisation of emergency response. In the case of the announcement of radiation extraordinary event, the continuous shift personnel (except the shift management personnel in the main control room), depending on its category, either continue carrying out activities according to the relevant intervention instructions and guidelines from the shift management personnel, or assemble, in the case of the announcement of protective measures, in the operations support centre in the shelter under the service building, from where, on the basis of the instructions from the shift engineer or emergency staff, they carry out the required interventions on technology or provide the operational support to the team of the internal brigade of the Fire and Rescue Service (hereinafter referred to as the “HZSp”) in recovery and rescue works. For the needs of ensuring the implementation of protective measures of sheltering and assembly, shelter and assembly teams are established to ensure the activation and subsequent operation of shelters and assembly points on the premises of NPP.

Emergency Command Centre

The Emergency Command Centre with the Emergency Staff (HŠ) is the main control workplace of the NPP organisation of radiation extraordinary event response. After its activation, the emergency staff shall ensure communication and transfer of information to the Crisis Staff of ČEZ, regulatory bodies, provide information to the general public and announce protective measures for persons situated on the premises of NPP at the time of occurrence of a radiation extraordinary event, and control the activities carried out by all employees and other persons taking part in intervention to suppress the development and deal with the consequences of radiation extraordinary event at NPP, and communicate with components of crisis preparedness. The Emergency Staff shall secure the supply of necessary material, special means, and alternating the personnel as well as their material security through the logistics support centre. The composition of the Emergency Staff is shown in Figure B - 4 for Dukovany NPP and Figure B - 5 for Temelín NPP.

Technical Support Centre

Technical Support Centre personnel handles the recommendations for the MCR personnel of the affected unit in dealing with radiation extraordinary events. The TPS staff also ensures immediate evaluation of nuclear power plant condition in consideration of nuclear safety and radiation protection; has control over the activity of intervention teams in radiation extraordinary event response is able to prepare inputs and recommendations for decision-making and control activities of the Emergency Response Board.

If required by shift engineer or Head of the Emergency Response Board, support can be requested for Technical Support Centre staff from other specialists. The composition of the Technical Support Centre is shown in Figure B - 4 for Dukovany NPP and Figure B - 5 for Temelín NPP.

Off-site Emergency Support Centre (VHPS)

The VHPS staff is responsible for the management of activities associated with radiation monitoring, assessment of radiation situation in the emergency planning zone, prepares for the crisis staff forecasts of the impacts of radiation extraordinary event on the population in the emergency planning zone, and the VHPS Analyst processes the form "Proposal for Evacuation of Population in the Emergency Planning Zone" for the governor of the region with local jurisdiction. At the off-site emergency support centre, the functions of LRKO Dosimetrist, MMS Dosimetrist and MMS Driver shown in Figure B - 4 for Dukovany NPP and B - 5 for Temelín NPP are performed and are organisationally subordinate to the VHPS Analyst.

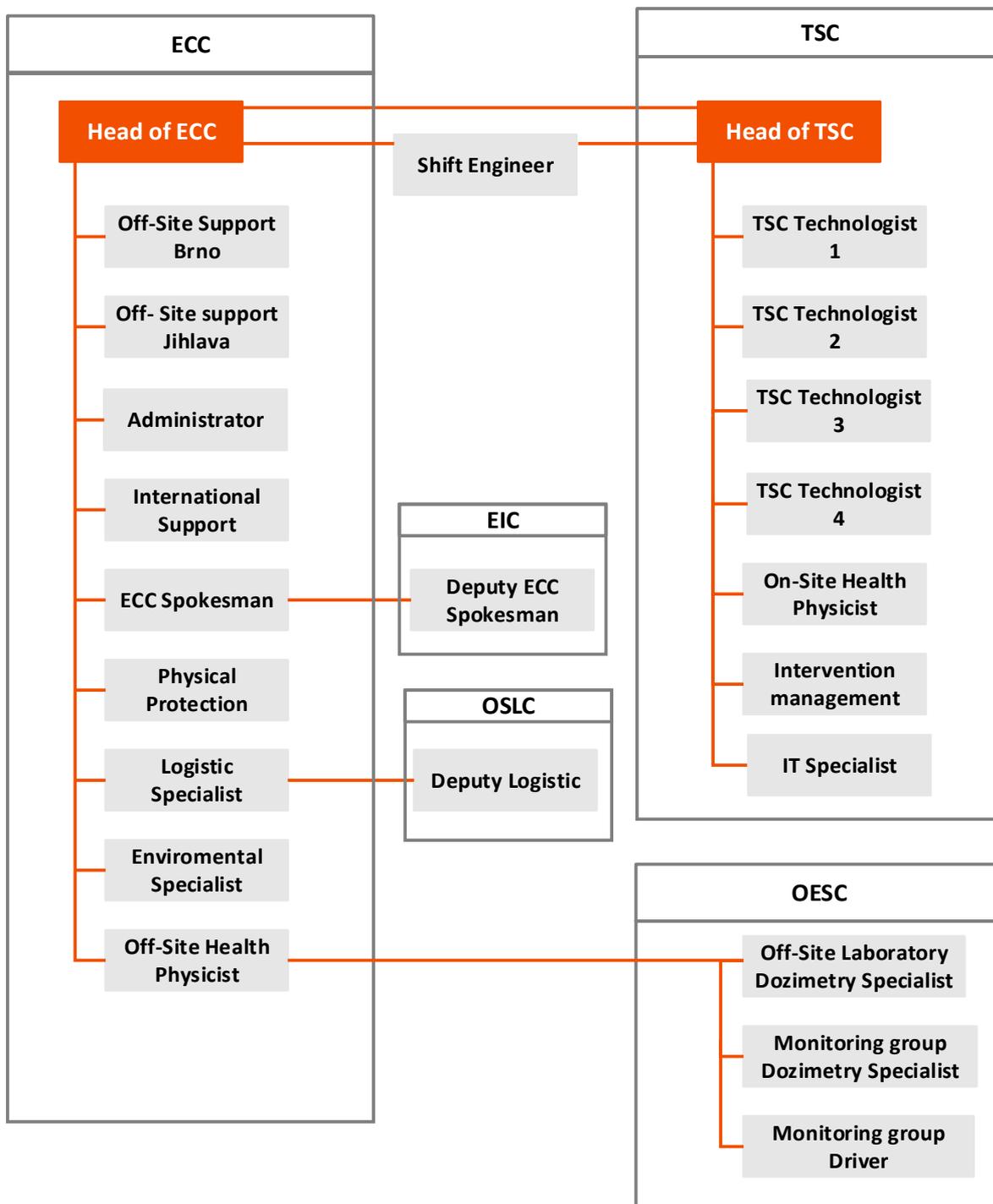
Emergency Information Centre (HIS)

Emergency Information Centre staff (HIS) shall ensure, in the case of a radiation extraordinary event, the distribution of all information to mass media and the answering of questions from the public. The centre is responsible for preparing press releases for mass media. The HIS in the Dukovany NPP is mobilised in the Information Centre (integrated press centre - ITS) or the Fire and Rescue Service of the South Moravian Region. The HIS in the Temelín NPP is mobilized in the Emergency Response Board or VHPS or ITS of the South Bohemian Region. In the event of a radiation emergency, the integrated press centre brings together press representatives of the authorities concerned (ČEZ, Fire and Rescue Service, Police of the Czech Republic, Emergency Medical Services, etc.) and thus provides comprehensive information to the public and the media. The deputy spokesperson for emergency staff prepares inputs to inform the public through social networks, ČEZ website and distributes press releases. The structure of the Emergency Information Centre is shown in Figure B - 4 for Dukovany NPP and Figure B - 5 for Temelín NPP.

Logistics Support Centre

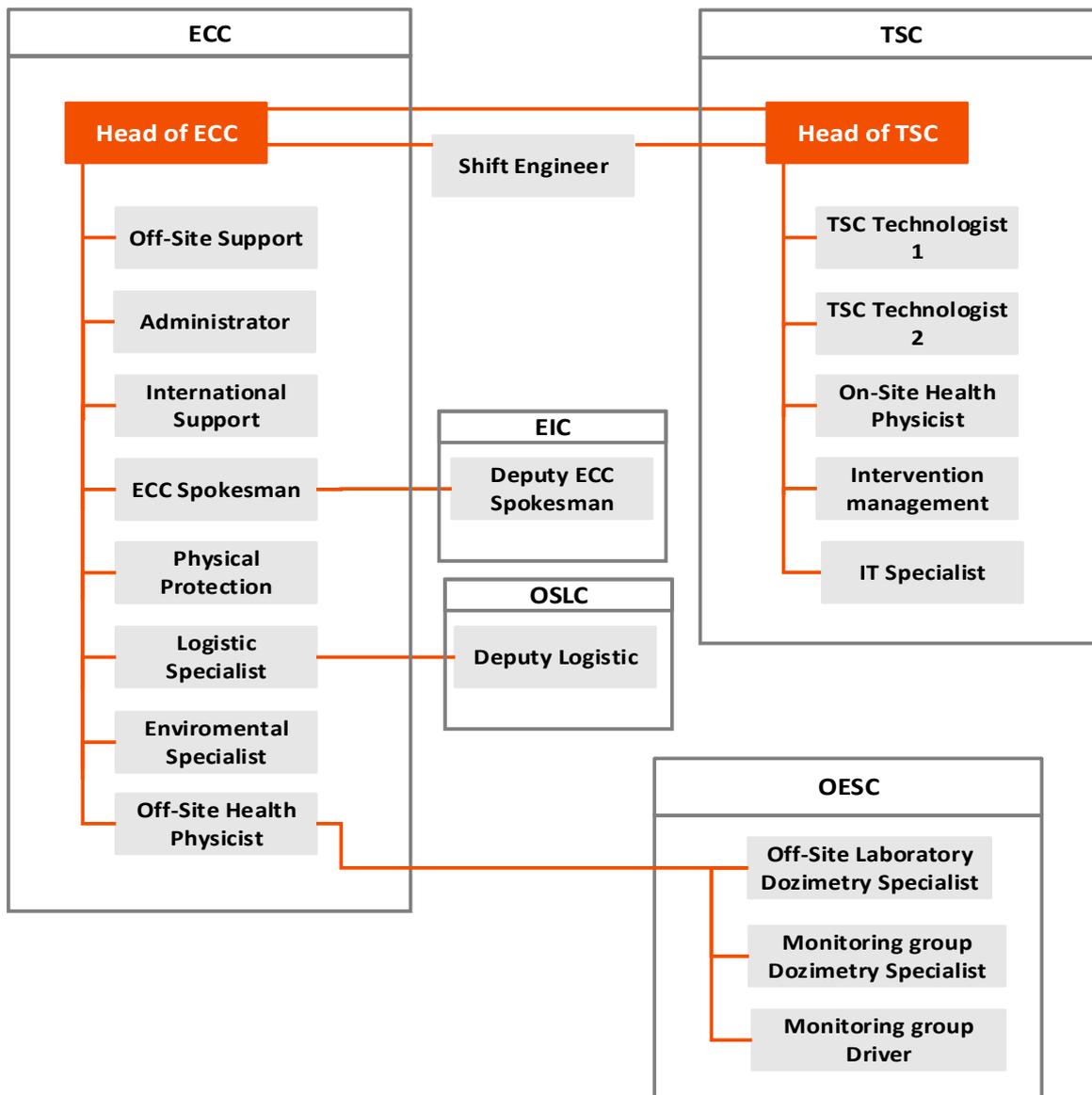
Logistics Support Centre staff provides the necessary material and technical resources and qualified human resources according to the requirements and needs of the Emergency Response Board. The LSC is the external support of the ERO. The LPS in the Dukovany NPP is mobilised within the Secondary Technical School, Třebíč and the LPS in the Temelín NPP is mobilized in the workplace in the Collega K5 of the University of South Bohemia in České Budějovice. The structure of the Logistics Support Centre is shown in Figure B - 4 for Dukovany NPP and Figure B - 5 for Temelín NPP.

Figure B - 4 Diagram of organisational structure of POHO EDU



Note: ECC – Emergency Command Centre, TSC – Technical Support Centre

Figure B - 5 Diagram of organisational structure of POHO ETE



Note: ECC – Emergency Command Centre, TSC – Technical Support Centre

Shelters and Assembly Points

To implement the protective measures for personnel, a system of shelters and assembly points is available at NPP. Each shelter at NPP contains equipment for the protection of persons against the effects of radioactive substances, poison warfare agents and biological warfare agents. Thanks to their construction, these shelters provide protection to persons against the effects of strong radiation. Technical facilities within the shelter allow their operation for at least 72 hours. In a basic setup, the shelters contain dosimetry devices for measuring surface contamination and dose rate, spare emergency means of protection, spare clothing, shoes, iodine prophylaxis, supply of drinking water, means of communication with the HŠ workplace, and supply of non-perishable food in selected shelters. Spare emergency means of protection, spare clothing and medical material are distributed by members of the shelter team, based on justified needs and the requests of sheltered persons.

Person at NPP are trained and informed about their place of sheltering (assembling) and when an event is announced, they shall remove thereto on the basis of instructions issued by SI or instructions issued

by emergency staff, and observe the code of conduct for sheltered/assembled persons. Persons at NPP shall shelter/assemble in a shelter/at an assembly point defined by a sheltering/assembling plan. In the event that persons are outside their workplace, they shall hide in the shelter that belongs to the building in which they are situated. There are 7 shelters available in the Dukovany NPP with a total capacity of 2450 persons. In addition to the shelters, there are 2 assembly points in the Dukovany NPP for the assembly of persons when a radiation extraordinary event is declared. There are 4 shelters available in the Temelín NPP with a total capacity of 1775 persons. In addition to the shelters, there are 3 assembly points in the Temelín NPP for the assembly of persons when a radiation extraordinary event is declared.

Provision of Health Services

Procedures are prepared for the medical care of persons who are at the NPP site and are affected by the radiation extraordinary event:

Search for persons: A member of the Emergency Staff at the Protection post is responsible for recording and control of the movement of persons in the area during radiation extraordinary event.

First aid: Knowledge of providing first aid is ensured at the NPP through training system for all employees. To provide first aid, individual workplaces (including shelters and assembly points) are equipped with the necessary medical equipment.

Pre-hospital emergency medical services: At the Dukovany NPP, pre-hospital emergency medical services are provided to injured persons through the emergency physician providing first aid services. At the Temelín NPP, pre-hospital emergency medical services are provided to injured persons through the rapid medical assistance team (paramedics from ZZS Jčk and an ambulance driver).

After providing the necessary health services and evaluating the health status of the affected persons, the emergency personnel will decide on further need to activate other components of the Emergency Medical Services.

Detailed procedures for emergency personnel are referred to in the ČEZ Methodology - Ensuring Activities Under the Trauma Plan in the Dukovany NPP/Temelín NPP.

Professional or special medical assistance: Professional care is provided in dealing with the trauma event associated with a radiation extraordinary event in the České Budějovice hospital (applies to the Temelín NPP) and in Třebíč, Ivančice and Znojmo hospitals (applies to the Dukovany NPP).

For the provision of special medical assistance to persons exposed during a radiation extraordinary event, the Journal of the Ministry of Health of the Czech Republic No. 5/2013 prescribes the use of specialised medical devices listed in Chapter B.2.17.

A.3.2 NPP Emergency Planning Zones

Emergency planning zones are established in the vicinity of both NPPs in the Czech Republic, which are divided into sectors for the purpose of implementing urgent and follow-up protective measures. The imposition of protective measures uses the keyhole principle when the measures are imposed within 5 km circle around NPP and further in five selected sectors depending on the results of radiation situation monitoring and meteorological conditions.

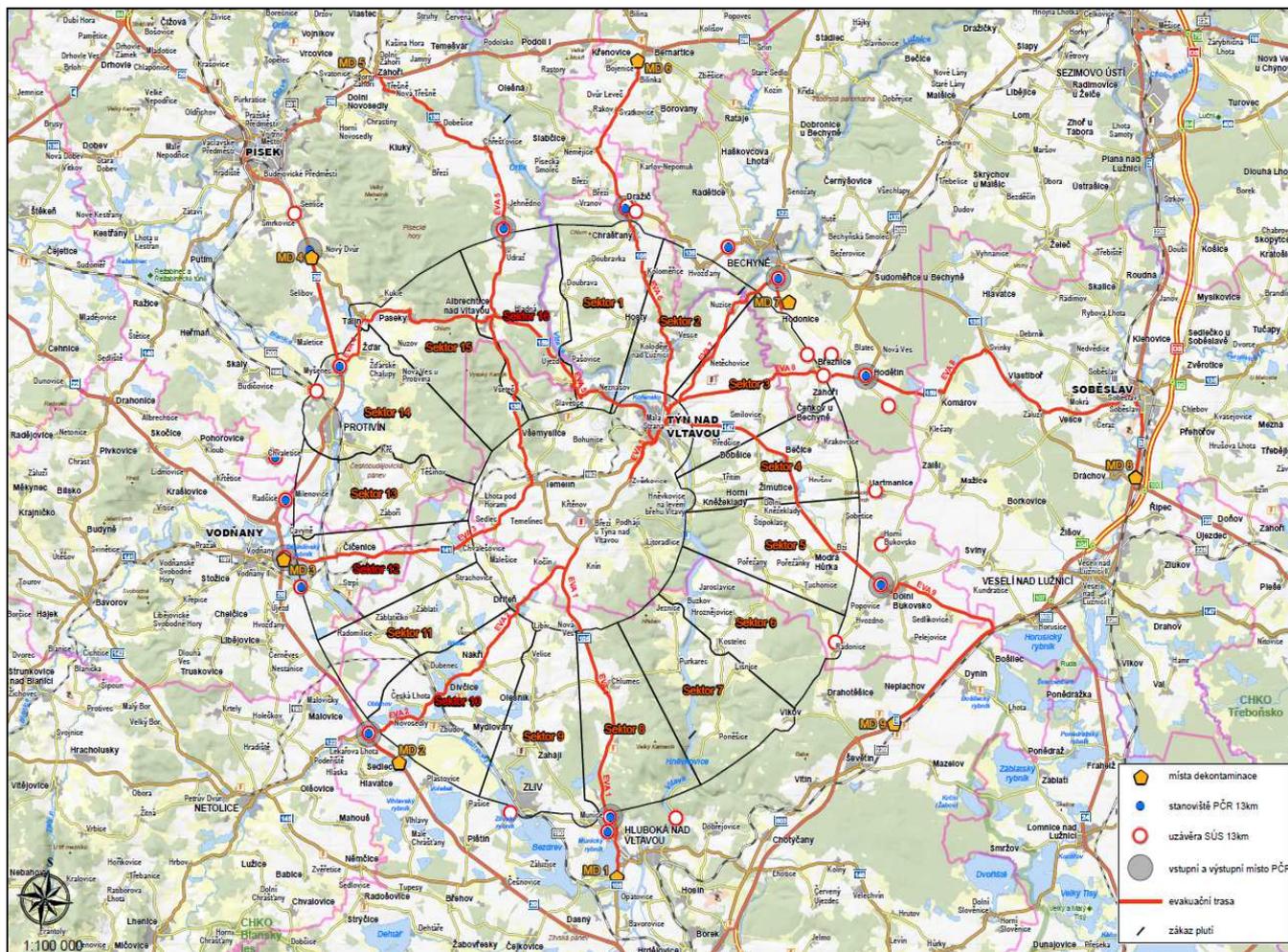


Figure B-6 Emergency planning zone of Temelín NPP

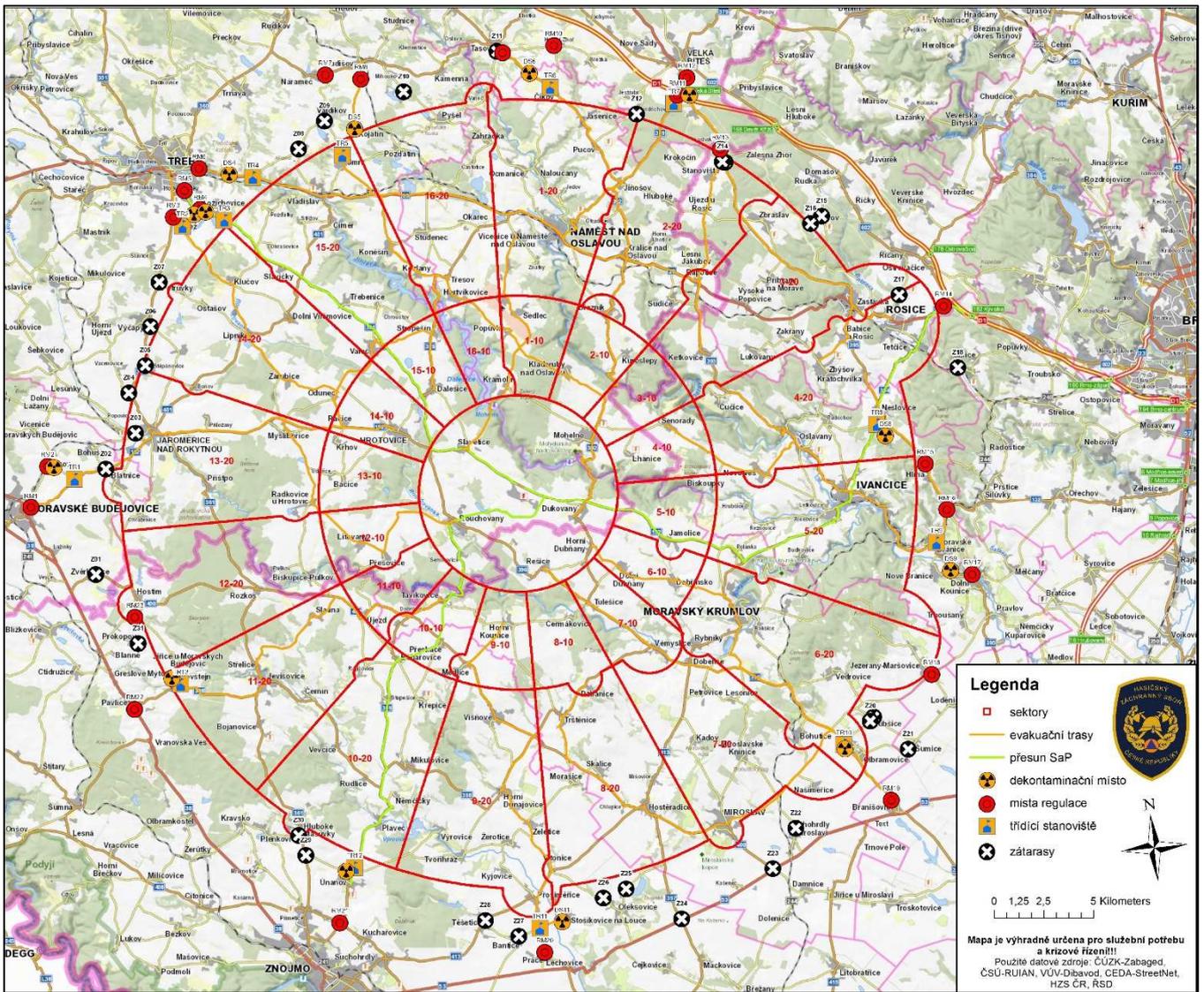


Figure B - 7 Emergency planning zone of Dukovany NPP

The following system of announcement and implementation of protective measures is prepared in both emergency planning zones:

After the announcement of a radiation accident sirens in the emergency planning zone are activated on the basis of a decision taken by the shift engineer of NPP. The broadcasting of emergency information follows the warning signal through the terminal warning elements, fitted with the module for transmission of voice information and mass information resources. Inhabitants and persons situated in the emergency planning zone (i.e. at work, in schools, kindergartens, etc.) are asked to shelter and use an iodine prophylaxis. Sheltering of the population is planned and prepared in the emergency planning zone, and in the case of a radiation extraordinary event, sheltering is carried out immediately after warning of the population without waiting for the results of the monitoring of actual radiation situation. Inhabitants and persons situated in the on-site emergency planning zone (i.e. zone with a radius of 10 km for Dukovany NPP and zone with a radius of 5 km for Temelín NPP) are asked to prepare for evacuation. The evacuation of persons is carried out on the basis of the form “Proposal for Evacuation of Population in the Emergency Planning Zone”. The form is processed by the VHPS Analyst and approved by the Head of Emergency Staff depending on the results of radiation situation monitoring in the emergency planning zone (in the event of declared radiation accident and measured values

higher than 1 mSv/h) and real meteorological conditions (wind direction, weather category, precipitation, etc.). The NPP operator then sends this proposal to the governor of the region with local jurisdiction and the SÚJB. This proposal must be confirmed or clarified by the SÚJB and must be decided by the crisis staff of the competent region.

Tablets for iodine prophylaxis (potassium iodine – KI) are pre-distributed to the population within the emergency planning zone (families, schools, hospitals, workplaces) with that the regional authority or the Fire and Rescue Service have approximately 10% reserve of KI doses and the population can also buy these preparations in pharmacies. Antidotes provided to the population in the emergency planning zone are changed by NPP operator prior to the expiration date.

A.3.3 Uniform Warning and Notification System

The Fire and Rescue Service of the Czech Republic provides and operates a uniform warning and notification system, which secures warning and notification throughout the Czech Republic.

The uniform warning and notification system is technically, operationally and organisationally secured by notification centres, telecommunication networks and end warning and notification elements. For details of the uniform warning and notification system see Annex 3.

A siren test is carried out in the Czech Republic at 12:00 p.m. every 1st Wednesday in a calendar month.

A.3.3.1 Population Warning in the Emergency Planning Zone

The warning of the population in the emergency planning zone, which consists of a 20 km zone around the Dukovany NPP and a 13 km zone around the Temelín NPP, is ensured by means of end warning elements (primarily alarm sirens and local information systems) followed by the immediate broadcasting of emergency information; the information includes an instruction to introduce urgent protective measures in the form of sheltering and the use of iodine prophylaxis. This information is supplemented by radio and television broadcasting of prepared information concerning the occurrence of radiation accident, explanation of the measures to be implemented (sheltering, iodine prophylaxis – ingestion of antidotes), and the recommendation on the preparation and evacuation of the population living within a 5 km inner zone of Temelín NPP and within a 10 km inner zone of Dukovany NPP.

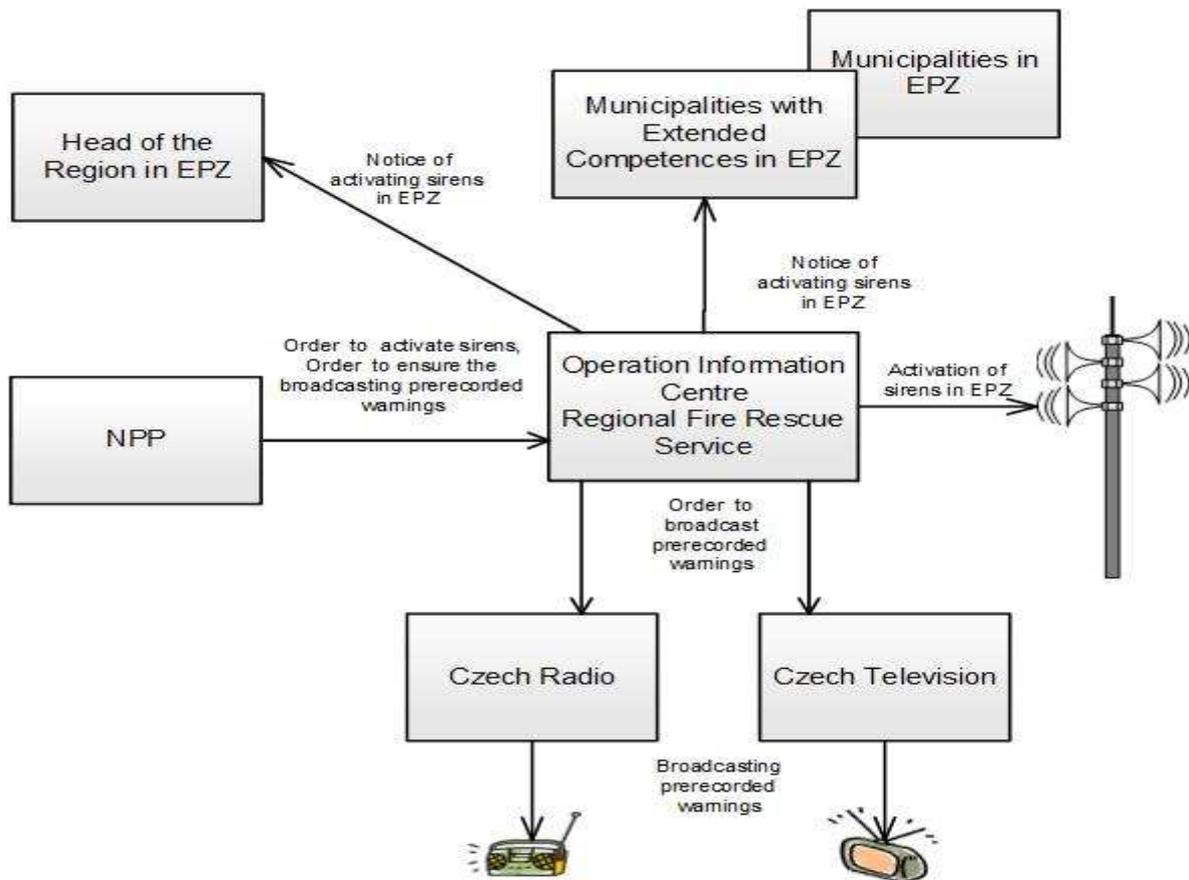


Figure B - 8 Schematic representation of the public warning system within the emergency planning zone in the event of a radiation accident

Note: KOPIS – Operation Information Centre of the Regional Fire and Rescue Service, ZHP – emergency planning zone

The population is warned through the “General Alert” warning signal. The signal indicates a general danger and is sounded by warble tone of siren during 140 seconds and it can sound three consecutive times at approximately three-minute intervals. The warning signal is activated by the Fire and Rescue Service of the Czech Republic on request of the shift engineer of the NPP operator. The signal is immediately followed by spoken emergency information notifying the population of the data on the imminent or emerged extraordinary event and of the measures for protection of population, in particular the instruction to introduce urgent protective measures in the form of sheltering and the use of iodine prophylaxis. The provision of such emergency information is performed through the end warning elements, fitted with the module for transmission of voice information and mass information resources. Other specific information on danger and protection mode will be communicated to the population immediately via radio (Český rozhlas 1 Radiožurnál Station) and television (Czech TV channels ČT 1, ČT 24), local radio, vehicles of the components of the Integrated Rescue System, or other available method.

A.3.4 Ensuring Radiation Extraordinary Event Response of NPP or Workplace with Sources of Ionising Radiation

In the case of radiation extraordinary event, the operator of NPP or a workplace with sources of ionising radiation shall, pursuant to Act No. 263/2016 Coll., ensure response to a radiation extraordinary event occurred during the activities carried out by the operator under the appropriate on-site emergency plan, in particular:

- a) Immediately initiate radiation extraordinary event response,

- b)** Immediately warn natural persons present at the nuclear installation grounds or in the premises of the workplace using a source of ionising radiation, take measures to protect them and inform the SÚJB of these measures, and, in the case of a radiation incident involving a suspected release of radioactive substances or ionising radiation out of the nuclear installation grounds or premises of the workplace using a source of ionising radiation, or in the case of a radiation accident, also inform other authorities concerned and the persons specified in the on-site emergency plan; in the case of a radiation accident, the warning shall include a proposal for taking urgent protective actions,
- c)** Immediately notify the SÚJB about the occurrence or suspected occurrence of a radiation extraordinary event and, in the case of a radiation incident involving a suspected release of radioactive substances or ionising radiation out of the nuclear installation grounds or premises of the workplace with ionising radiation sources, or in the case of a radiation accident, also immediately inform the local competent mayors of municipalities with enlarged jurisdiction and the local competent governor of region through the territorially competent operations and information centre of the Fire and Rescue Service of the Czech Republic and other authorities concerned as specified in the on-site emergency plan,
- d)** In the case of the occurrence or suspected occurrence of a radiation accident, in cooperation with the Fire and Rescue Service of the Czech Republic, immediately start warning the general public in the emergency planning zone and ensure the immediate broadcast of the emergency information³; the information shall include the instruction to take urgent protective action in the form of sheltering and application of iodine prophylaxis,
- e)** Control, evaluate and regulate the exposure of natural persons participating in radiation extraordinary event response at the nuclear installation grounds or in the premises of the workplace using a source of ionising radiation,
- f)** Propose to the governor of the region the taking of urgent actions to protect the general public in the emergency planning zone in the form of evacuation according to the actual or expected development of the radiation accident and according to the results of radiation situation monitoring,
- g)** Forward to the SÚJB data to evaluate the radiation accident and forecast its development, including data on the meteorological situation in the site of the radiation accident,
- h)** In the case of a radiation incident or radiation accident, inform the SÚJB and, in the case of a radiation incident or radiation accident involving a suspected release of radioactive substances or ionising radiation out of the nuclear installation grounds or the premises of the workplace with ionising radiation sources, inform the Fire and Rescue Service of the Czech Republic and other authorities and persons concerned as specified in the on-site emergency plan about the actions taken by them in the course of responding to the radiation extraordinary event,
- i)** In the case of a radiation accident, immediately inform the general public affected by this radiation accident about the facts and expected development of the radiation accident,
- j)** If a radiation incident or radiation accident is suspected, ensure radiation situation monitoring in the emergency planning zone in accordance with the relevant monitoring programme and the relevant instructions from the SÚJB given in response to the development of the exposure situation, and transmit the data obtained from the monitoring to the SÚJB,
- k)** Cooperate in the preparation of remedial action after a radiation accident in the area affected by the radiation accident.

The Czech Hydrometeorological Institute shall ensure the evaluation of the current meteorological situation and the preparation of meteorological forecasts for the NPP operator mentioned above under letter g). The outputs of the basic meteorological data necessary for evaluating the potential or actual

³ § 10 of Decree No. 380/2002 Coll.

spread of radioactive leakages in the vicinity of NPP are provided to the relevant information networks of NPP.

According to Decree No. 359/2016 Coll., the operator in the management and implementation of response shall:

- a) Declare a radiation extraordinary event,
- b) Notify the SÚJB, i.e.
 - 1. Immediately after the detection of a radiation accident;
 - 2. Not later than four hours following the detection of a radiation incident;
 - 3. Not later than 24 hours following the detection of a radiation extraordinary event of degree one;
- c) Notify the local competent mayors of municipalities with enlarged jurisdiction and the local competent governor of the region through the territorially competent operation and information centre of the Fire and Rescue Service of the Czech Republic and other authorities concerned as specified in the on-site emergency plan and the neighbouring person, specifically
 - 1. Immediately after the detection of a radiation accident;
 - 2. Not later than four hours following the detection of a radiation incident connected with the suspicion of potential leakage of radioactive substances or the spread of ionising radiation from the premises of the nuclear installation or workplace with sources;
- d) Restrict emergency exposure;
- e) Provide health services;
- f) In the case of a radiation incident or radiation accident, inform the SÚJB in writing about the activities carried out during radiation extraordinary event response and about the activities carried out during radiation extraordinary event response in the case of a radiation incident associated with the suspicion of release of radioactive materials or the spread of ionising radiation out of the nuclear installation grounds or the workplace with a source of ionising radiation,
- g) Process the progress of response from the time of detection of a radiation extraordinary event, including the chronology of all orders given as regards response management in the form of written report on the occurrence and course of the radiation extraordinary event, and
- h) In the case of radiation accident
 - 1. Immediately inform the general public affected by this radiation accident about the radiation accident and expected development of the radiation accident,
 - 2. Set out the requirements for the receipt of external assistance;
 - 3. Transmit, in the form of remote transmission of data files, data needed for evaluating the radiation accident, i.e. data concerning the immediate state of systems, structures and components of a nuclear installation or a category IV workplace and concerning the radiation situation in the premises of the nuclear installation or category IV workplace, and for predicting its development, which are supplemented by additional data on the meteorological situation in the emergency planning zone; where the remote transmission in the course of response is impossible, the licensee shall provide an alternative way of their transmission.

In the case of radiation extraordinary event, the NPP operator shall activate the POHO. The shift engineer is responsible for the announcement and categorisation of the radiation extraordinary event occurred as well as for the management of activities. After activation, the emergency staff shall transfer responsibility to the activated head of emergency staff. The shift engineer shall perform the following

activities according to the intervention instruction for the shift engineer, which specifies all responsibilities and powers, which include but are not limited to (unless already performed by the activated emergency staff and the Technical Support Centre):

- a) Assessment of the severity and categorisation of the radiation extraordinary event,
- b) Notification and warning of NPP personnel and warning in the emergency planning zone,
- c) Notification of NPP management and competent authorities and organisations of the occurrence of radiation extraordinary event,
- d) Decision as to the activation of personnel of the organisation of emergency response,
- e) Decision concerning protective measures for NPP personnel,
- f) Responsibility for technology remains within the competence of the shift engineer.

For scheme of notification of authorities and organisations made by NPP operator see Figure B - 9.

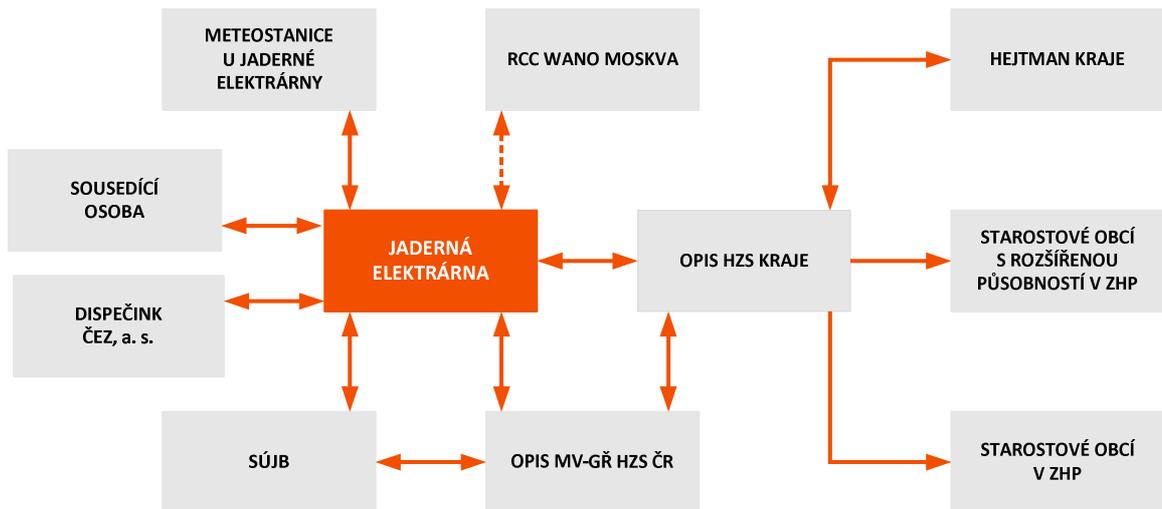


Figure B - 9 Scheme of notification of authorities and organisations made by NPP operator

Note: OPIS - Operation Information Centre; Dashed lines indicate the information under agreement between ČEZ, a.s. and WANO

The NPP operator continues to communicate with authorities and organisations at the national and local levels as shown in Figure B - 2. In the case of a radiation incident with the suspicion of release of radioactive material or the spread of ionising radiation or a radiation accident at NPP, the NPP operator, through its emergency staff, provides the crisis staff of SÚJB and the regions with the necessary cooperation, data and information needed for the assessment of the severity of the situation occurred. In the event of a radiation accident at NPP, the NPP operator shall provide the regional authority with the necessary cooperation, data and information needed to inform about the situation and its development. To ensure cooperation, the NPP operator shall send its representative to the regional crisis staff.

As part of the declaration of radiation extraordinary event, the operator of NPP or workplace with sources of ionising radiation shall also activate the emergency persons, to the extent and time determined by the on-site emergency plan or intervention instructions. (When the operator of workplace with ionising radiation sources does not draw up the on-site emergency plan, it means that only radiation extraordinary events of degree 1 may occur at the workplace operated by this operator. Then, the operator shall response to such an extraordinary event on the basis of the relevant intervention instruction.)

On the basis of the legislation of the European Union, bilateral agreements and international conventions, the EU countries, neighbouring countries and the International Atomic Energy Agency (hereinafter referred to as "IAEA") shall be informed on the occurrence of radiation accident, which could possibly have transboundary impacts. Information is provided in USIE systems, ECURIE web or through

direct communication with the party to the bilateral agreement. Towards IAEA, SÚJB acts as the “National Competent Authority for an Emergency Abroad/for a Domestic Emergency”. Towards IAEA, the Ministry of the Interior - General Directorate of Fire and Rescue Service of the Czech Republic acts as the “National Warning Point”. Towards the European Union, SÚJB and the Ministry of the Interior – General Directorate of Fire and Rescue Service of the Czech Republic act as the “Competent Authority” and the “Contact Point”, respectively.

Communication schemes for the above-mentioned potentials for a radiation accident are given in the national radiation emergency plan.

Note: When finding or searching lost sources of ionising radiation (which do not have to be a radiation extraordinary event), the recommendation “Radioactive Material Capture Procedure” shall apply (see - <https://www.sujb.cz/dokumenty-a-publikace/publikace-sujb>, which was published in 2002) and SÚJB shall additionally follow the relevant internal procedure for the activity to be carried out by SÚJB upon capture or finding of radioactive materials.

A.4 Radiation Extraordinary Event Response Preparedness Documentation

A.4.1 Radiation Extraordinary Event Response Preparedness Documentation of Operator of NPP or Workplace with Sources of Ionising Radiation

An important part of the radiation emergency management system of operators of NPP or workplaces with sources of ionising radiation is the documentation of radiation extraordinary event response preparedness. Specifically, the documents are: Plan to Ensure Radiation Extraordinary Event Management; On-site Emergency Plan, and Intervention Instructions.

In accordance with Act No. 263/2016 Coll., and Decree No. 359/2016 Coll., the operator of NPP or workplace with ionising radiation sources shall, in order to ensure radiation extraordinary event management, create adequate organisational and staffing conditions so that in the case of the occurrence of radiation extraordinary events, NPP personnel are prepared to immediately respond to the situation occurred and take up the pre-planned activities aimed at suppressing the negative effects and consequences, and at ensuring the radiation protection of individuals. Therefore, the first document that must be developed on this topic is the so-called “Plan to Ensure Radiation Extraordinary Event Management”, which is drawn up as part of an application for a licence for the siting of NPP or a licence for the construction of category IV workplace, which is not NPP. An on-site emergency plan and intervention instructions shall be drawn up for all other phases of the so-called life cycle of NPP or workplaces with sources of ionising radiation. The NPP on-site emergency plan shall be approved by SÚJB. The on-site emergency plan contains a set of all planned measures to solve and to reduce the consequences of radiation extraordinary events. In particular, it describes the creation of technical-organisational and personnel conditions to ensure radiation extraordinary event response preparedness. The descriptions given in the on-site emergency plan are followed by intervention instructions, which are drawn up for the needs of management and implementation of response to the radiation extraordinary event. The intervention instructions are listed in the on-site emergency plan.

The plan for radiation extraordinary event management contains in particular

- a) Introduction
- b) Brief characteristics of ionising radiation sources that are expected to be handled of in NPP or at a category IV workplace,
- c) Consideration given to radiological emergencies of first degree, radiation incidents or radiation accidents, which are considered in connection with the construction, commissioning, operation and decommissioning of NPP or in connection with the construction, operation and decommissioning of a category IV workplace,
- d) Following the radiation extraordinary events, which are considered, consideration given to their potential impacts on the individuals in the premises of the NPP or in the area of category

- e) IV workplace or on the neighbouring persons and on any measures to protect them, Consideration given to potential impacts on the public in the vicinity, to any measures to protect the public and to the need, where appropriate, to establish the emergency planning zone where a radiation accident is considered,
- f) Following the radiation extraordinary events, which are considered, consideration given to
 1. The detection of radiation extraordinary events,
 2. Declaration of radiation extraordinary event,
 3. Response management and implementation, including consideration given to the commencement of the construction of shelters,
 4. Restriction on emergency exposure, including planned number of individuals who will be concerned by the restriction,
 5. Provision of health services.

The on-site emergency plan contains in particular

- a) Introduction
- b) Part concerning the performance of the licensed activity
 1. A list and description of radiological emergencies of first degree, radiation incidents and radiation accidents, which are considered in licensed practice, including ways of their detection,
 2. Description of the possible influencing of any neighbouring person due to a radiation extraordinary event during licensed activity,
- c) Description of response preparedness
 1. Description of technical and organisational arrangements to detect a radiation extraordinary event of first degree, radiation incident or radiation accident
 2. Description of technical and organisational arrangements to declare a radiation extraordinary event
 3. Description of technical and organisational arrangements intended for response management and implementation, including designation of individuals involved in response management and implementation and a list of potential individuals involved in the intervention and the way of their activation
 4. Description of technical and organisational arrangements to restrict emergency exposure,
 5. Description of material and organisational arrangements to provide health services,
 6. Description of technical and organisational arrangements to verify response preparedness, and designation of the individual responsible for the verification,
 7. Designation of the person intended to receive external assistance,
 8. Description of technical and organisational arrangements to verify the on-site emergency plan and the intervention instruction, and designation of the individual responsible for the verification,
 9. Description of technical and organisational arrangements to verify the functionality of technical means,
 10. Description of technical and organisational arrangements to verify the efficiency and consistency of the on-site emergency plan, off-site emergency plan and the national radiation emergency plan,
 11. Designation of the person responsible for terminating the response to radiation accident and initiating the remedy of the situation following the radiation accident,
 12. Designation of the person responsible for delineating the area contaminated as a result of radiation accident in the premises of NPP or at category IV workplace,
 13. A list of persons and authorities to be notified of the radiation extraordinary event,
 14. Designation of the person responsible for ensuring familiarisation with the plan,

15. Designation of the person responsible for the development and updating of basic information in the event of a radiation accident,

- d) Principles of the strategy for optimised radiation protection for the existing exposure situation as a result of emergency exposure situation associated with the radiation accident in its nuclear installation or category IV workplace in operation,
- e) Principles for initiating the remedy following the radiation accident in the premises of the nuclear installation or at category IV workplace,
- f) Annexes.

The intervention instruction contains

- a) Purpose and objective of the particular activity in response management or implementation;
- b) Designation of the person responsible for the implementation of activities,
- c) A list of emergency action levels,
- d) Description of the particular activity including emergency action levels, which activate the particular activity or which are critical for next actions in this or any other activity carried out in response management or implementation;
- e) Organisation of response management or implementation or, where appropriate, cooperation with other individuals involved in the intervention, including contract individuals involved in the intervention and the methods of their interconnection;
- f) A list of technical, instrumentation, medical and other material equipment needed for response management and implementation, and designation of the place of their storage;
- g) A list of protective equipment needed in response implementation or management, and designation of the place of their storage;
- h) The method and scope of documentation of activities performed under the intervention instruction.

A.4.2 Radiation Extraordinary Event Response Preparedness Documentation outside Nuclear Power Plant

If the NPP has the emergency planning zone established, then the off-site emergency plan is another important document. Off-site emergency plans are elaborated for the established emergency planning zone by territorially competent regional HZS in accordance with the requirements laid down by Act No. 239/2000 Coll., and Regulation No. 328/2001 Coll. The off-site emergency plan is an overarching document that serves to ensure emergency preparedness, establishes the basic procedures of the IZS components and other affected entities in the event of a potential serious radiation accident, and defines measures to minimize the effects of a serious accident outside the facility or installation - i.e. in the emergency planning zone. For the case of a radiation extraordinary event, tasks and measures are planned in the off-site emergency plan for the emergency planning zone to remedy the radiation extraordinary event and the consequences thereof, aimed at protecting the population and the environment. The off-site emergency plan shall be drawn up on the basis of underlying information provided, in accordance with Act No. 263/2016 Coll., and Decree No. 359/2016 Coll., by NPP operator and on the basis of partial underlying documents prepared by competent regional authorities, IZS and municipalities. Prepared external emergency plans shall be discussed with the NPP operator and with the SÚJB and the Ministry of the Interior - General Directorate of Fire and Rescue Service of the Czech Republic and are in accordance with Act No. 239/2000 Coll. and Act No. 263/2016 Coll., approved by the governor of the region. The off-site emergency plan consists of information part, operative part, and plans for specific activities.

Off-site emergency plans determine the objectives and methods of ensuring the individual types of protective measures such as:

- a) notification of bodies and organisations,
- b) warning of the population,

- c) sheltering of the population,
- d) iodine prophylaxis,
- e) evacuation of people, including dosimetric checks and decontamination at the exits from the endangered territory,
- f) regulation of persons movements within the endangered territory,
- g) medical care.

The content and structure of the off-site emergency plan are defined in Decree No. 328/2001 Coll. (see Annex 4).

Regional Emergency Plan

A regional emergency plan is drawn up for the purposes of management of extraordinary events, which require announcement of alarm of degree 3 or alarm of special degree. The content and structure of the regional emergency plan are defined in Decree No. 328/2001 Coll. (see Annex 5).

The Regional Fire and Rescue Service shall draw up the regional emergency plan using the analysis of the occurrence of extraordinary events and the threats to the territory of the region resulting therefrom, the documents provided by legal persons and natural persons engaged in business activity, and the documents provided by administration authorities concerned, municipal authorities, individual components and in cooperation with them.

The Regional Fire and Rescue Service shall provide the components, administration offices and municipalities, which fulfil the tasks defined by regional emergency plan, extracts from regional emergency plan to elaborate their activities for the case of the occurrence of extraordinary events.

Regional Fire Alarm Plan

A regional fire alarm plan shall serve primarily to ensure the cooperation between the fire protection units in the region in fire-fighting operations, in carrying out rescue and remedy works on the territory of the region, in providing aid among regions and in providing aid to a neighbouring state.

Regional Fire Alarm Plan of the Integrated Rescue System and Central Alarm Plan of the Integrated Rescue System

The regional alarm plan of the Integrated Rescue System contains:

- a) Connection to basic and other components of the Integrated Rescue System,
- b) Overview of forces and means of other components of the Integrated Rescue System,
- c) Method for calling and notifying the main components of the Integrated Rescue System and other posts and authorities.

The regional alarm plans of the Integrated Rescue System are a list of all forces and means of the components of the Integrated Rescue System, which may be used in tactical, operational or strategic coordination of rescue and remedial work. The regional alarm plans are drawn up under the agreements on the planned assistance on request. They are based on the regional emergency plans and the risk analyses contained therein.

The central alarm plan of the Integrated Rescue System is applied:

- a) If needed as a result of extraordinary event, crisis situation or safety-related action, and if conditions set out by law for central coordination of rescue and remedy works are met,
- b) If the governor of the region, the mayor of the municipality with enlarged jurisdiction, the director of Regional Fire and Rescue Service or the leader of the intervention team requests, through the Operation Information Centre of the Regional Fire and Rescue Service, assistance and forces and means, not available to the components of the Integrated Rescue System at regional level, to carry out rescue and remedy works in an extraordinary event dealt with separately in the relevant region.

For more information on IZS documentation please visit: <https://www.hzscr.cz/clanek/dokumentace-izs-587832.aspx?q=Y2hudW09Ng%3D%3D>

Type Plans

Type plans define the recommended type procedures, principles and measures to deal with a particular type of crisis situation. They form a part of the emergency plan of the central administration office in question. One of the type plans is the type plan “Radiation Accident” available at: <https://www.sujb.cz/dokumenty-a-publikace/typovy-plan-radiacni-havarie>.

Type Activities of the Components of the Integrated Rescue System in Joint Intervention

Type activities of the components of the Integrated Rescue System in joint intervention are a recommending methodological standard for the actions taken by the components of the Integrated Rescue System in rescue and remedy works, taking into account the type and nature of extraordinary event, which is followed by binding internal regulations of individual components of the Integrated Rescue System.

One of the extraordinary events, for which the type activity was prepared, is the “Accomplished and Verified Use of a Radiological Weapon” - see STČ-01/IZS: Špinavá bomba (<https://www.hzscr.cz/clanek/dokumentace-izs-587832.aspx?q=Y2hudW09Ng%3D%3D>). This type activity deals with the approach of the components of the Integrated Rescue System in case of a terrorist attack with the use of a radiological weapon (so-called “dirty bomb”) or when a radioactive substance was dispersed in other unexpected way, for which tactical and organisational requirements, procedures and guidance levels to prove the optimisation of radiation protection are not governed by regulation (or emergency plan).

National Radiation Emergency Plan

The SÚJB and the Ministry of the Interior drew up the National Radiation Emergency Plan for the territory of the Czech Republic outside the premises of the nuclear installation or category IV workplace pursuant to Act No. 263/2016 Coll., for preparing for the management and implementation of the response to a radiation incident or radiation accident with an impact outside the emergency planning zone. The plan was approved by Resolution of the Government of the Czech Republic No. 1276 on 7 December 2020. It will be followed no later than two years after its approval. The National Radiation Emergency Plan is available at: <https://www.sujb.cz/nrhp>.

A.5 Verification of radiation extraordinary event response preparedness

Radiation extraordinary event response preparedness is verified in the Czech Republic both inside and outside NPPs or workplaces with sources of ionising radiation, i.e. in particular in the emergency planning zone. Verification takes place in the form of emergency exercises or drills, the most important of which are the so-called “ZÓNA” exercises.

A.5.1 Emergency Exercises Organised at the Central Level

Pursuant to the provisions of § 10 letter j) of the Crisis Act, the Exercise Plan of the crisis management bodies of the Czech Republic for a period of 3 years is drawn up by the Ministry of the Interior-General Directorate of Fire and Rescue Service of the Czech Republic, in cooperation with the competent ministries and central administration authorities. This plan shall be discussed and approved by the National Security Council and specified each subsequent year. ZÓNA type exercises are also included in this plan (see - <https://www.hzscr.cz/clanek/krizove-rizeni-a-cnp-cviceni-organu-krizoveho-rizeni-cviceni-organu-krizoveho-rizeni.aspx>), dealing with the management of an extraordinary event, or crisis situation as a result of a radiation accident.

The ZÓNA exercises are intended to verify the effectiveness and mutual compliance of the on-site emergency plan and the off-site emergency plan (and from 2023 this verification will also be extended

to the national radiation emergency plan). This verification takes place by jointly practising of the scenario for a radiation accident occurring at one of the NPPs, once every 4 calendar years for each NPP. In the period from 2014, the ZÓNA 2015 (Temelín NPP and emergency planning zone), ZÓNA 2017 (Dukovany NPP and emergency planning zone) and ZÓNA 2019 (Temelín NPP and emergency planning zone) exercises were held. The purpose of these exercises was to practise and verify in particular:

- a) the activities of the emergency response organisation training NPPs and communication flows with crisis management authorities in the event of a radiation accident,
- b) the activities of the crisis management authorities according to the off-site emergency plan of the respective NPP,
- c) the activities of the crisis management authorities of the Czech Republic in accordance with the “Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency” and according to “Council Decision 87/600/EURATOM on Community arrangements for the early exchange of information in the event of a radiological emergency”,
- d) announcement and implementation of emergency monitoring of the radiation situation,
- e) the activities of the staff of the General Directorate of the Fire and Rescue Service of the Czech Republic during a radiation accident,
- f) the activities of the crisis staff of the SÚJB during a radiation accident,
- g) the activities of crisis management authorities in the performance of selected tasks for the protection of the population,
- h) the audio-video conference system between selected exercise participants,
- i) the timeliness of the relevant off-site emergency plan,
- j) the feasibility and timeliness of the “Radiation Accident” Type Plan, the Central Alarm Plan of the Integrated Rescue System and concluded agreements on planned assistance on request,
- k) the timeliness and feasibility of the crisis plans of regions,
- l) the system for informing the public upon the occurrence of radiation accident, recommending the principles of behaviour,
- m) procedures for the cooperation of the central administration authorities in the process of solving requests for material resources.

For basic information to evaluate these exercises see point E.1.2.

A.5.2 Emergency Exercises Organised by the State Office for Nuclear Safety

In accordance with Act No. 263/2016 Coll., SÚJB organizes and conducts emergency exercises and drills of its crisis staff to practise responding to crisis situation - radiation accident. These are emergency exercise or drills related to radiation situation monitoring or joint exercise of the crisis staff of SÚJB and the emergency staff of both NPPs. For these needs, the SÚJB shall draw up a Crisis Staff Exercise Plan, which takes into account the plan of exercises for crisis management bodies, plans of exercises for operators and international exercises planned for that calendar year.

SÚJB takes part in exercises at international level organised mainly by the European Commission, the International Atomic Energy Agency (“ConvEx” exercise), the Nuclear Energy Agency of the Organisation for Economic Co-operation and Development (INEX exercise), and bilateral exercises with the neighbouring states, which are prepared under bilateral agreements.

A.5.3 Emergency Exercises of Local Authorities

The local authorities shall take part in exercises at nationwide level, organize their own exercises to practise activities of the Integrated Rescue System and their crisis staff, and exercises to verify the off-site emergency plan and their emergency plans.

A.5.4 Emergency Exercises of Fire and Rescue Service of Regions, on the Territory of which the Emergency Planning Zone of NPP Is Located

In addition to the exercise “ZÓNA” (see sub-chapter A.5.1), the fire protection teams shall take part in regular exercises at NPP, which are held alternatively at the Temelín NPP and at the Dukovany NPP. The exercises aim at routine activities carried out by fire-fighters such as firefighting, cooling, which, in conditions of the premises of NPP, relate to other activities such as coordination with Fire and Rescue Service teams of ČEZ company, orientation and tactics of intervention in unknown environment, cooperation with other components of the Integrated Rescue System, personal dosimetry system, radiation quantity measurement or decontamination. The exercise takes one day, is held once a year and is organised by the Ministry of the Interior- General Directorate of Fire and Rescue Service of the Czech Republic in cooperation with the competent Fire and Rescue Service of regions and ČEZ, a.s.

A.5.5 Emergency Exercises of Operator of NPP or Workplace with Sources of Ionising Radiation

Act No. 263/2016 Coll. imposes an obligation on the operator of NPP and workplace with sources of ionising radiation to regularly verify radiation extraordinary event response preparedness by means of drills or emergency exercises according to the on-site emergency plan or intervention instructions. This verification of radiation extraordinary event response preparedness must be conducted on an annual basis and evaluated. Detailed requirements for emergency exercises and drills and the frequency of their implementation are set out in Decree No. 359/2016 Coll.

The purpose of emergency exercises and drills is to verify knowledge of employees of NPP and workplaces with sources of ionising radiation in the area of radiation extraordinary event response preparedness and to prove their skills to fulfil their tasks in a qualified, efficient and effective manner and to carry out activities set out by on-site emergency plan and appropriate intervention instructions.

Emergency exercises and drills are held according to the emergency exercise plan, which sets out the focus and scope of the exercise, and dates or frequency of emergency exercises. Annual plans for emergency exercises shall be drawn up and submitted to SÚJB no later than by the end of the previous calendar year.

The exercises of NPP operator verify also the adequacy and veracity of intervention instructions, equipment of emergency centres and the reliability of communication means to ensure the transfer of necessary data.

In conclusion, the exercise is evaluated in the form of final report. A summary evaluation for the calendar year is made for the completed emergency exercises, which is submitted to SÚJB not later than by the end of the first quarter of the following year, except the exercise for the case of the occurrence of a radiation accident, when the final report is submitted to SÚJB within 2 months after the evaluation of the exercise.

A.6 Measures to Mitigate Radiation Consequences

Measures to mitigate the consequences of radiation extraordinary events are specified in Act No. 263/2016 Coll. The measures aim at reducing the exposure of individuals and the environment during radiation extraordinary event. For individuals, the protective measure must eliminate the deterministic effects of ionising radiation and minimise the probabilistic (stochastic) effects to as low as reasonably achievable level given by radiation extraordinary event.

The protective measures are divided into:

- a) Urgent protective measures, which includes sheltering, iodine prophylaxis and evacuation,
- b) Follow-up protective measures, which includes relocation of inhabitants, regulation of the

use of radionuclide-contaminated foodstuffs and water, and regulation of the use of radionuclide-contaminated feedstuffs.

The imposition of protective measures must be always justified and the scope of measure must be optimised. When making decision on imposing the protective measures, the reference levels are applied, which reflect the current state of knowledge and internationally acquired experience about when greater benefit than damage may be expected from the given protective measure. All facts affecting the implementation of protective measures must be taken into account at the same time, particularly the presence of specific groups of the population, traffic situation, high population density, presence of a large residential unit, etc.

A.7 Measures to Mitigate Non-radiation Effects

A.7.1 Psychosocial Support to Persons Affected by Extraordinary Event

In dealing with the extraordinary event occurred, the psychosocial impacts on persons affected by extraordinary event and on rescuers should be always taken into account. The need to provide psychosocial support is not dependent only on the severity of situation and on the number of affected persons, but the actual condition of an individual, his/her needs and response to the event in question should be always taken into account.

Psychosocial support to persons affected by extraordinary event shall mean:

- a) Activity within the humanitarian aid and emergency survival,
- b) Meeting the needs detected in the physical, mental, spiritual and social area, in accordance with the values of the persons affected,
- c) In terms of time – first psychological support (short-term support in a period of extraordinary event and several days thereafter), medium-term support (approximately 5 days to 3 months after extraordinary event), long-term support (from 3 months after extraordinary event and thereafter).

Within rescue and remedy works, the first psychological support and short-term psychosocial support are provided, which involve the establishment of the cooperation with municipalities, local organisations and non-governmental non-profit organisations. Municipalities, local organisations and non-governmental non-profit organisations subsequently continue to offer medium-term and long-term supports. Psychosocial support within rescue and remedy works is organised by leader of the intervention team in the place of intervention. If a professional specialist is used for the given area, this person is included in the staff of the leader of the intervention team or as an assistant leader of the intervention team.

Psychosocial support is addressed in more detail, for example, within the type activity of the components of the Integrated Rescue System (STČ 12/IZS Type Activity of IZS Components in Provision of Psychosocial Support – see: <https://www.hzscr.cz/clanek/dokumentace-izs-587832.aspx?q=Y2hudW09MQ%3d%3d>), as well as the Rules of Combat of the Fire Protection Teams – Post Trauma Care to Fire Fighters and Psychosocial Support to Persons Affected by Extraordinary Event. The Ministry of the Interior – General Directorate of Fire and Rescue Service of the Czech Republic developed this issue in the document “Psychosocial Crisis Support and Cooperation Standards Aimed at Course and Result”.

A.7.2 Population Supply

The population in the contaminated area will be supplied on the basis of a decision taken by the head of the relevant region. The regional crisis staff is responsible for the management and organisation of the supply system and uses all existing devices and material means, mainly from own resources, to ensure the system, and fulfils its tasks using undertakings and their establishments, which are equipped and prepared for such activities.

The necessary supply is organised by the competent local authorities on a contract basis or by imposing an obligation. The organisations are selected by local authority, which subsequently concludes with their operators a contract for the provision of necessary supply to intended groups of population including mode of financial compensation.

The range and composition of goods cannot be defined in advance. This depends on the need of the affected population and on the possibilities of drawing (stocks). The supply also depends on the season, nature of accommodation and other security of affected persons. Specific amount and composition of the diet depend on the available sources of foodstuffs and on the capacity of cooking units. The affected population should get food and the adequate amount of drinks (hot drinks in winter) twice a day. Priority should be given to the needs of children and sick persons.

A.7.3 Trade Regulation Ensured While Taking into Account Non-radiation Consequences of Radiation Extraordinary Event

Trade regulation ensured while taking into account non-radiation consequences of a radiation extraordinary event in the Czech Republic is governed by EU legislation; for overview of EU legislation see Annex 6.

Decree No. 422/2016 Coll. indicates the value of the averted annual committed effective dose for regulation of radionuclide-contaminated foodstuffs, water, and feedstuffs. If it should be necessary to introduce this regulation, it would also involve the regulation of the trade in commodities in question.

A.8 Radioactive Waste Management

Radioactive waste management in the Czech Republic is governed in particular by Act No. 263/2016 Coll., and Decree No. 377/2016 Coll.

Act No. 263/2016 Coll., imposes an obligation upon anyone engaged in radioactive waste management to take into account all physical, chemical and biological properties of radioactive waste, which could affect the safety in radioactive waste management. At the same time, radioactive waste management can only be conducted in such a way so as not to cause an unreasonable technical, economic and social burden to current and future generations. Conditioning of radioactive waste by changing its physical or chemical properties or by using a packaging assembly must be carried out in such a way as to ensure its safe transportation, storage and disposal in accordance with the acceptability criteria of the relevant radioactive waste storage facility or repository. Conditioning of radioactive waste is usually carried out by consolidating and placing the waste in a packaging assembly. Radioactive waste management is dealt with in more detail in Decree No. 377/2016 Coll.

Radioactive waste management in the Czech Republic may not be carried out without a licence issued by SÚJB. Prior to the issue of a licence, the applicant must, among other things, prove in the documentation required by Act No. 263/2016 Coll., that it is able to ensure the radiation protection in the extent and at the level required by this Act and its implementing regulations. The ensuring of radiation protection is examined by inspections prior to the issue of a licence.

In connection with the minimisation of radioactive generation, Act No. 263/2016 Coll., requires to reduce the amount of generated radioactive waste through technical and organisational measures. Furthermore, the holder of a licence for the management of radioactive waste shall send to the Office an assessment of compliance with the limits and conditions of safe management of radioactive waste on a regular basis, but at least once a year.

Radioactive waste in the Czech Republic is collected, sorted, processed, conditioned into the form suitable for storage and disposed of in repositories provided that this radioactive waste meets the acceptability criteria of the repository in question. For the purposes of radioactive waste disposal, there are three radioactive waste repositories in the Czech Republic - the former Bratrství and Richard mines,

and the Dukovany repository. Radioactive waste must not be stored with other waste or materials. For details see point C.1.4.

If waste produced as a result of a radiation accident was classified as radioactive waste, it would be managed in the same way as other radioactive waste, as mentioned above. If this radioactive waste meets the acceptability criteria, it will be disposed of in the repositories in operation. Otherwise, this waste will be safely stored, separated from the environment by means of safe engineering barriers, until the time, when this waste could be disposed of or released into the environment.

A.9 System of Requesting, Delivering and Receiving International Assistance

Under the “Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency”, signed also by the Czech Republic, the Emergency Response Network (ERNET) was established by IAEA in 2000. Following a new concept of this original network, the network was renamed to the Response and Assistance Network (RANET) in 2005. RANET enables the Parties to the Convention, through the Convention, to request assistance and to receive offers for assistance related to radiation extraordinary events. The Czech Republic is a participant in the RANET network from 15 4. 2009. Therefore, the system of requesting, delivering and receiving international assistance in the Czech Republic is governed both by rules set out within the RANET network and by relevant legislation of the Czech Republic.

Within the RANET network, the Czech Republic registered its national capacities/sources for delivering assistance to other Parties to the above mentioned Convention. Registered were services in the area of source detection, radiation survey, taking and analysis of environmental samples, radiological evaluation and advisory as well as dose evaluation. All these capacities are currently registered as external support centres.

The delivery of humanitarian aid by the Czech Republic is governed by Act No. 151/2010 Coll. Pursuant to this Act, the Ministry of Foreign Affairs delivers the humanitarian aid to the states outside the European Union and the European Economic Area, and decides on its scope and form. The Ministry of Foreign Affairs in cooperation with the Ministry of the Interior decide on the provision of material and rescue assistance. Any assistance within the RANET network would be provided in the Czech Republic as part of the system of providing humanitarian aid.

Pursuant to Act No. 239/2000 Coll., the Ministry of the Interior fulfils tasks in the area of involvement of the Czech Republic in international rescue operations during extraordinary events abroad and provision of humanitarian aid abroad in cooperation with the Ministry of Foreign Affairs. The Ministry of the Interior – General Directorate of Fire and Rescue Service of the Czech Republic, in cooperation with the Ministry of Foreign Affairs, components of the Integrated Rescue System or central administration authorities, organizes rescue and material aid abroad. Some important rules related to the involvement in international rescue operations are set out in Government Decree No. 463/2000 Coll.

The state humanitarian aid is provided from funds allocated in the budget of the Ministry of Foreign Affairs. Depending on the nature of disaster, the Minister of Foreign Affairs, in agreement with the Minister of the Interior, decides on the release of funds from this budget, up to CZK 5 million. million per year. In each individual case, the release of funds above CZK 5 million must be decided on by the Government on the basis of a proposal submitted by the Minister of Foreign Affairs.

In general terms, there are the following forms of immediate humanitarian aid:

- a) Rescue (rescue team),
- b) Material,
- c) Financial,
- d) Advisory,
- e) Combined.

The Czech Republic provides the humanitarian aid abroad on a bilateral basis or through international organisations. The Operation Information Centre of the Ministry of the Interior - General Directorate

of Fire and Rescue Service of the Czech Republic is the contact point of the Czech Republic for international organisations and their operation centres such as ERCC, NATO-EADRCC, IAEA, UN-OCHA, etc.

In the case of any extraordinary event, when the affected state shall ask for assistance through the competent international organisation or through the representative office of the Czech Republic in the affected state, this information is received by the Operation Information Centre of the Ministry of the Interior - General Directorate of Fire and Rescue Service of the Czech Republic, which, in agreement with the Ministry of Foreign Affairs, shall prepare a proposal for the provision of assistance. Furthermore, the Operation Information Centre of the Ministry of the Interior - General Directorate of Fire and Rescue Service of the Czech Republic and the international organisation cooperate actively on the preparation, coordination and implementation of humanitarian aid.

In the course of the provision of humanitarian aid, the Ministry of the Interior – General Directorate of Fire and Rescue Service of the Czech Republic continues to cooperate with the Ministry of Foreign Affairs, which ensures, for example, the communication with the representative office, obtains information from the affected state, visas for members of the rescue team or visas for escort to material humanitarian aid. In addition, the Ministry of Foreign Affairs ensures the procedural delivery of humanitarian aid.

Special types of rescue teams are prepared as part of rescue humanitarian aid abroad. The teams are always composed so as to meet the needs in the place of emergency, and their members are mainly members of the Fire and Rescue Service of the Czech Republic, and possibly cynologists, employees of the National Institute for Nuclear, Chemical and Biological Protection and the National Radiation Protection Institute, members of the Police of the Czech Republic, etc.

The material humanitarian aid abroad is delivered on the basis of a particular application of the affected country, which is subsequently considered by Czech party and, where appropriate, the humanitarian aid is provided by the Czech Republic. The Ministry of the Interior in agreement with the Ministry of Foreign Affairs decides also on material humanitarian aid.

The Ministry of Foreign Affairs decides on the provision of financial humanitarian aid abroad. This aid is mostly provided through international organisations or directly to a bank account specified by the affected state.

In accordance with the existing regulations, the procedure defined in Annex 7 is applied to the involvement of the Czech Republic in international rescue operations or to the delivery of humanitarian aid abroad.

The Czech Republic has concluded bilateral government agreements on cooperation and assistance in disasters, natural disasters and other extraordinary events with all neighbouring countries and with Hungary, which enables the rescue teams in the case of an extraordinary event to cross the national boundary in simplified regime. Within the cross-border cooperation, the teams of the relevant territorial unit (Regional Fire and Rescue Service) intervene on the territory of the relevant territorial unit of the neighbouring state under the above mentioned agreements. The application for assistance is transferred between the operation centres of the relevant territorial units; on the Czech part, this is the Regional Operation Information Centre of the Fire and Rescue Service. All interventions on the territory of another state shall be subsequently reported to the Operation Information Centre of the Ministry of the Interior - General Directorate of Fire and Rescue Service of the Czech Republic. In addition, the agreements govern, for example, joint trainings, exercises, information exchange, use of radio stations, compensation of damage incurred, use of aircraft etc. The Czech Republic has also concluded bilateral agreements concerning the area of nuclear safety, radiation protection and radiation extraordinary event management. For a list of such agreements see Annex 8.

A.10 Taking Decision to End the Response

Taking decision to end the response to a radiation extraordinary event is a complex process, in which a number of different factors must be taken into account, however, in particular the current exposure situation in the given area. In detail, the process of ending the response to a radiation extraordinary event and starting to remedy the situation after a radiation accident, or the transition from accidental to existing exposure situation is described both in the national radiation emergency plan and in the type plan - radiation accident (both are available at: <https://www.sujb.cz/nrhp>).

B. REMEDY FOLLOWING RADIATION ACCIDENT

Act No. 263/2016 Coll. defines new principles for remedial action after a radiation accident and thus imposes an obligation on both the SÚJB and the NPP operator. The Act stipulates that:

- a) The SÚJB issues proposals for the introduction, clarification or withdrawal of protective measures relating to contaminated areas and members of the public to remedy the situation after radiation accident for the area affected by radiation accident or any part thereof after the termination of the response to a radiation extraordinary event in the management of contaminated area.
- b) The NPP operator, whose activities resulted in a radiation accident, shall
 1. carry out remedial action after a radiation accident in the area of the nuclear installation or at the category IV workplace in accordance with the strategy of optimised radiation protection according to the on-site emergency plan,
 2. decommission the nuclear installation or category IV workplace, if it is not possible to restore its operation, and
 3. provide cooperation in the management of the contaminated area outside the premises of the nuclear installation or category IV workplace and participate in the compensation of damage to other persons according to other legislation⁴.

C. OVERVIEW OF NUCLEAR INSTALLATIONS AND WORKPLACES WITH SOURCES OF IONISING RADIATION

The nuclear installations in operation in the Czech Republic include nuclear power plants, spent nuclear fuel storage facilities, research nuclear reactors and radioactive waste repositories. For their current overview please visit: <https://www.sujb.cz/jaderna-bezpecnost/jaderna-zarizeni/jaderna-zarizeni-v-cr/>

On the basis of Act No. 263/2016 Coll. (and before its entry into force on the basis of Act No. 18/1997 Coll.), workplaces with sources of ionising radiation are classified into four categories. Category I workplaces are the least hazardous workplaces and category IV workplaces are potentially the most hazardous workplaces. Depending on the degree of threat they may pose to the health and the environment, the ionising radiation sources are classified into one of the five groups – insignificant, minor, simple, significant and very significant. Current overviews of these workplaces are presented in the Report on SÚJB Results and on Radiation Situation Monitoring on the Territory of the Czech Re-

⁴ Act No. 18/1997 Coll. on Peaceful Utilisation of Nuclear Energy and Ionising Radiation (the Atomic Act) and on Amendments and Additions to Related Acts, as amended.

§ 26 of Act No. 240/2000 Coll., on Crisis Management and on Amendment to Certain Related Acts (Crisis Act), as amended.

public for the previous year, drawn up annually during the first quarter and submitted to the Government of the Czech Republic for approval. Reports are available at: <https://www.sujb.cz/dokumenty-a-publikace/vyrocní-zpravy/>.

C.1 Overview of Nuclear Installations and Workplaces with Sources of Ionising Radiation

The Czech Republic operates a total of 6 energy generating units with VVER reactors at two NPPs (Dukovany and Temelín), owned and operated by ČEZ a.s., two research reactors in the Research Centre Rez and a training reactor at the Faculty of Nuclear Sciences and Physical Engineering of the Czech Technical University in Prague.

C.1.1 Dukovany NPP and Temelín NPP

Four generating units with VVER-440/213 pressurised water reactors, the primary design electric power of which was 440 MW for each unit (total installed power 1760 MW), are operated at the Dukovany NPP. The maximum electric power of each unit is currently 510 MW. This value was achieved as part of increasing the efficiency and using power margins of units. The construction of all units of the Dukovany NPP was commenced in 1979. Unit 1 was put into operation in 1985 and the remaining three units between 1986 and 1987. An emergency planning zone with a radius of 20 km is established for the Dukovany NPP – for details see point A.3.2.

Two mono-units with pressurised water reactors VVER-1000/V 320 are operated at the Temelín NPP. The construction of the power plant commenced in 1987 according to the design documentation for serial unit of 1984. In the early nineties, the design was modernised in cooperation with the WESTINGHOUSE Company. Unit 1 and Unit 2 were put into operation in 2001 and 2002, respectively. The total installed electric power is 2000 MW; after design modifications, the power of each of the units was increased to 1125 W in 2013. An emergency planning zone with a radius of 13 km is established for the Temelín NPP – for details see point A.3.2.

All assessments of safety level of both NPPs carried out by international teams and their main conclusions are listed in the National Report of the Czech Republic for the purposes of the Convention on Nuclear Safety available at: <https://www.sujb.cz/dokumenty-a-publikace/narodni-zpravy/>

In 2011, the so-called Stress Tests were performed at both NPPs - a targeted review of safety margins of NPP in connection with the events occurred at the Fukushima NPP. Based on the results of Stress Tests, an Action Plan to improve safety was drawn up for both Czech NPPs, which is available at: – see: <https://www.sujb.cz/aktualne/detail/clanek/narodni-akcni-plan-k-dalsimu-posileni-jaderne-bezpecnosti-dukovan-a-temelina-dokonceni/>.

C.1.2 Research Reactors in the Research Centre Rez

Research Reactor LVR-15

The construction of the reactor originally called VVR-S was commenced in 1955 and the reactor was put into operation on 24 September 1957. Its thermal power was 2 MWt. The reactor served as a multi-purpose research reactor for the Czechoslovak nuclear program and the national economy. The reactor was used to produce radioisotopes, to irradiate materials and for scientific research in the reactor physics area. Its output was increased to 4 MWt in 1964. Essential reconstruction took place in 1989, when all equipment including the reactor vessel was replaced. Transition to highly enriched fuel IRT-2M (80%) was performed and the output was increased to 8 MWt. In 1994, the maximum permitted power level was increased to 10 MWt. In the nineties, significant increase of the experimental capacities of the reactor LVR-15 involved the construction of several experimental loops, which model the conditions in PWR and BWR reactors, thus enabling to test the structural materials in real conditions. In 1995, the reactor switched to fuel with lower enrichment (36% ²³⁵U).

In addition to material research (irradiation of reactor pressure vessel materials, material corrosion tests of primary circuit and internals of NPP) and tests of water regime testing in the primary circuit, the reactor is used for neutron activation analysis, production and development of new radiopharmaceuticals, production of radiation-doped silicon for electrical industry, irradiation service and scientific research of material properties in horizontal channels.

LR-0 Research Reactor

The critical assembly LR-0 was created by reconstructing the heavy-water critical assembly TR-0, which was constructed in ÚJV Řež a.s. and most of its equipment was manufactured in the former Czechoslovakia. It served for core research of energy generating reactor JE A-1 (HWGCR) in Jaslovské Bohunice. It was put into operation in 1972 and operated until 1979.

In connection with the transition of the Czechoslovak Nuclear Programme to NPP with VVER type pressurised water reactors, the assembly TR-0 was reconstructed to an experimental zero-power light-water reactor LR-0, which was put into continuous operation in 1983. Maximum allowed output of the reactor is 5 kWt and it is operated using shortened fuel assemblies of VVER-1000 and VVER-440 reactors. It serves for research of core physics (it has a variable pitch of rod lattice), storage racks and for modelling of neutron fields in power reactors. The reactor can be controlled using absorption rods, boric acid and by moderator level.

For more details about the above-mentioned research reactors please visit:
<http://reaktory.cvrez.cz/>.

C.1.3 VR-1 Training Reactor at ČVUT - FJFI

In December 1990, the training nuclear reactor VR-1 was first put into operation at the Faculty of Nuclear Sciences and Physical Engineering of the Czech Technical University in Prague. The fuel used in the reactor was the Russian fuel IRT-M and all other equipment of the reactor was manufactured in the former Czechoslovakia. The reactor is used in the training process of students under the study programmes of the Faculty of Nuclear Sciences and Physical Engineering, in scientific-research activities and for the needs of preparing the nuclear energy specialists of the Czech Republic. In October 2005, the 36% ²³⁵U enriched fuel of VR-1 reactor was exchanged for 20% ²³⁵U enriched IRT-4M fuel. Thus, the reactor VR-1 became the first reactor with the Russian fuel of IRT type, which underwent this replacement.

C.1.4 Radioactive Waste Repository and Spent Nuclear Fuel Storage

There are three radioactive waste repositories, two spent nuclear fuel storage facilities, one spent nuclear fuel interim storage facility, and one high-level waste storage facility.

Radioactive Waste Repository Richard

The Radioactive Waste Repository Richard is located near the town of Litoměřice, in the complex of the former limestone mine Richard II (beneath the Bídnice Hill - 70 m below ground). The communication corridor is 6 - 8 m wide, with a height of 4 - 5 m. The individual disposal chambers are accessible from the communication corridor. Since 1964 the institutional waste (i.e. radioactive waste coming from the use of radioisotopes by institutions in the health sector, industry and research) has been disposed therein. The total volume of the modified underground area exceeds 17000 m³, the capacity for waste disposal is approximately half the volume, and the rest comprises service corridors.

Radioactive Waste Repository Bratrství

This repository, which is located near the town of Jáchymov, is intended only to receive waste containing natural radionuclides. The repository was constructed by the adaptation of a mining shaft of the former uranium mine Bratrství, when 5 chambers were prepared for the disposal, with the total vol-

ume of nearly 1200 m³. It was put into operation in 1974. The mine is situated in water-bearing crystalline complex and therefore, a drainage system with a central retention tank and continuous retention tanks is constructed in the vicinity of the disposal chambers.

Radioactive Waste Repository Dukovany

The Radioactive Waste Repository Dukovany was constructed on the premises of the Dukovany NPP for disposal of conditioned radioactive waste from nuclear energy sector. Any leakage of radionuclides into the biosphere is prevented by a system of barriers with long lifetime. It has been in continuous operation since 1995. The total volume of the disposal rooms of 55000 m³ (approximately 180,000 drums with a capacity of 200 l) is sufficient for disposal of all radioactive waste from Dukovany NPP and Temelín NPP, which meets the conditions of acceptability for disposal, even in the case of a prolongation of their operational lifetimes to 40 years.

Current information about the above-mentioned repositories is available at: <https://www.su-rao.cz/pro-verejnost/stavajici-uloziste/o-ulozistich/>.

Interim Spent Fuel Storage Facility at the Dukovany NPP

The Spent Fuel Interim Storage Facility Dukovany is situated on the premises of the Dukovany NPP and is used for storage of spent nuclear fuel from VVER-440 reactors operated at the Dukovany NPP.

Spent Nuclear Fuel Storage Facility Dukovany

The Spent Nuclear Fuel Storage Facility Dukovany is the second facility intended for storage of spent nuclear fuel from VVER-440 reactors operated at the Dukovany NPP. The storage facility is situated also on the premises of the Dukovany NPP.

Spent Fuel Storage Facility at the Temelín NPP

The Spent Nuclear Fuel Storage Facility Temelín, which is situated on the premises of the Temelín NPP, is used for storage of spent nuclear fuel from VVER-1000 reactors operated at the Temelín NPP.

Current information about the above-mentioned storage facilities and interim storage facilities is available at: <https://www.sujb.cz/jaderna-bezpecnost/jaderna-zarizeni/jaderna-zarizeni-v-cr/>.

High Level Waste Storage Facility

The High Level Waste Storage Facility on the premises of ÚJV Řež, a.s. is used for storage of high-level waste and can be used for wet and dry storage of spent nuclear fuel produced during the operation of research reactors.

C.2 Workplaces with Sources of Ionising Radiation

As mentioned above, workplaces where work is carried out with sources of ionising radiation are classified in accordance with Decree No. 422/2016 Coll., in category I, II, III or IV.

Workplaces of category IV are:

- a) workplaces with nuclear reactors and related process equipment;
- b) spent fuel interim storage facility, spent fuel storage facilities, radioactive waste repository and high-level waste storage facility;

Most important workplaces of category III are:

- a) Uranium-mining industry workplace of DIAMO, s.p.,
- b) Workplaces of Svornost Mine, Léčebné lázně Jáchymov, a.s.,
- c) Workplaces with large industrial irradiator (workplace for radiation sterilization of medical stores BIOSTER, a.s., Veverská Bítýžka),
- d) Workplaces producing, or using sealed and unsealed radionuclide sources with a total high

activity of the companies:

- e) Radiotherapeutic workplaces in health facilities throughout the territory of the Czech Republic.

Current overviews of these workplaces are presented in the Report on SÚJB Results and on Radiation Situation Monitoring on the Territory of the Czech Republic for the previous year, drawn up annually during the first quarter and submitted to the Government of the Czech Republic for approval. Reports are available at: <https://www.sujb.cz/dokumenty-a-publikace/vyrocní-zpravy/>.

D. EDUCATION IN THE AREA OF CRISIS MANAGEMENT SYSTEM

D.1.1 Education of Experts

The education of experts takes place in accordance with the “Concept of Education in the Area of Population Protection and Crisis Management”, which was approved by the Resolution of the Government of the Czech Republic No. 508 of 10 July 2017. The concept set a system solution to the training of persons in the area in question, established target groups and forms of education, specified individual levels of education, set up a system of training and education of lecturers, and established a method of financial, organisational and material security of education.

Education in the field of population protection and crisis management is methodically directed and managed by the Ministry of the Interior. Other central administration authorities participate in the activities related to education depending on their competences and jurisdiction. An interdepartmental working group has been established at the level of the Committee for Civil Emergency Planning to solve complex technical issues related to the educational process in the area of population protection and crisis management. This working group is composed of representatives of the Ministry of the Interior - General Directorate of Fire and Rescue Service of the Czech Republic, the Department of Security Policy and Crime Prevention of the Ministry of the Interior, the Ministry of Defence, the Ministry of Health, the Ministry of Education, Youth and Sports, the Administration of State Material Reserves, and the Police Presidium of the Czech Republic. The activities of the interdepartmental working group are managed by the Ministry of the Interior-General Directorate of Fire and Rescue Service of the Czech Republic and the group is convened ad-hoc according to current needs.

The above-mentioned education/training is mainly intended for officials of local authorities, civil servants, persons whose service relationships are governed by special legislation for armed forces and security forces, employees of legal entities and entrepreneurial natural persons, whose job duties are affected by obligations in relation to crisis and defence planning and population protection, elected officials, security liaison employees of critical infrastructure entities and university students studying in the field of population protection and crisis management.

For the educational needs of the above-mentioned target groups, the competent central administration authorities, according to their area of jurisdiction, have developed educational modules - study materials that are available to educational institutions and, in electronic form, to the participants in courses. The issue related to radiation accident appears in the “Module A - Crisis Management in Non-military Crisis Situations, Module B - Defence of the State, and Module C - Protection of the Population”.

The training process includes also cooperation with universities preparing future experts in the area of safety. Universities may accredit their own study program in the area of safety. They are created on the basis of the methodology developed by the Ministry of the Interior. Obtaining a positive opinion from the Ministry of the Interior or the Ministry of Defence is also the condition for granting study program accreditation.

The education and training of health professionals in the Czech Republic is governed by Act No. 95/2004 Coll., and Act No. 96/2004 Coll., and their implementing regulations. According to the educational programs for individual medical specialisations, an obligation is imposed upon all physicians who indicate (and apply) medical exposure (including general practitioners and medical specialists) to take one-day training course of radiation protection, which includes a lecture on biological effects of ionising radiation and a lecture on the health care system for individuals exposed in case of a radiation extraordinary event. An IAEA/WHO leaflet is distributed to the health facilities in the Czech Republic.

D.1.2 Trainings Organised by Fire and Rescue Service of the Czech Republic

In accordance with the requirements of crisis legislation, the Fire and Rescue Service of the Czech Republic organizes trainings for members of the Fire and Rescue Service of the Czech Republic in the area of preparation for response to radiation extraordinary event in the form of the below listed postgraduate courses:

a) Course “Radiation protection”

This course is intended for the teams of the Fire and Rescue Service of regions. The content of the course is, for example, the characteristics and biological effects of ionising radiation, ionising radiation sources, places with radiation risk, principles of radiation protection in intervention, radiation intervention tactics, instrumentation, detection of ionising radiation sources, contamination monitoring.

b) Course “Decontamination of firefighters”

This course is intended for the teams of the Fire and Rescue Service of regions. The content of the course is, for example, the classification of hazardous substances in terms of decontamination, decontamination procedures and agents, principles for fire-fighter decontamination, decontamination equipment, and determination of decontamination efficiency by means of decontamination equipment.

c) Course “Operation of the SEOD HZS software package”

This course is intended for the members of the Fire and Rescue Service of regions, who are authorised to implement the electronic personal dosimetry system (SEOD). The content of the course are the activities primarily related to the system of monitoring of received doses by members of the Fire and Rescue Service of the Czech Republic in extraordinary events and the operation of the relevant SW.

d) Course “Worker of chemical laboratories of the Fire and Rescue Service of the Czech Republic - radiation part”

This course is intended for the personnel of chemical laboratories of the Fire and Rescue Service of regions and, where appropriate, of mobile groups of RMS, whose activity is ensured by the Police of the Czech Republic or by the Customs Administration of the Czech Republic. The content of the course are primarily professional and special activities carried out by mobile groups, e.g. detection, identification and quantification of ionising radiation sources, assessment of contamination with radioactive substances emitting alpha, beta, and gamma radiation, evaluation of sources emitting neutron radiation, handling of ionising radiation sources, monitoring of contaminated areas, radiation situation monitoring by routes, sampling and spectrometric evaluation of samples, monitoring of radioactive substances in a cloud and in field.

D.1.3 Education Organised by Operator of NPP or Workplace with Sources of Ionising Radiation

The obligation of the operator of NPP and the workplace with a source of ionising radiation to provide a system of education for natural persons affected by the intervention instruction or the on-site emergency plan in the area of radiation extraordinary event management is set out by Act No. 263/2016 Coll. Details of the content of this education are determined by Decree No. 359/2016 Coll.

The NPP operator has this obligation elaborated in internal documents, where the training is broken down into different levels in terms of job classification and assignment within the emergency response organisation. Each individual training course is based on the training plans and the Theoretical Training Plan for that year, which sets out a detailed division of individual types of training.

Training in the area of radiation extraordinary event response preparedness, i.e. implementation of education and training to respond to a radiation extraordinary event, is broken down as follows:

- a) Training for management of ČEZ, a.s.,
- b) Training for employees of ČEZ, a.s.,
- c) Training for suppliers,
- d) Training for employees assigned to the emergency response organisation,
- e) Training for members of sheltering and assembling teams,
- f) Specialised trainings (e.g. health personnel training, evacuation bus driver training, training for mayors of the municipalities, etc.),
- g) Visits, traineeships, excursions.

D.1.4 Education Organised by the State Office for Nuclear Safety

SÚJB organizes, according to the internal regulations, training for workers employed to carry out some of the functions of SÚJB's crisis staff.

D.1.5 Preparation of the Population

An indispensable tool for protection of the population in response to a radiation extraordinary event is its preparation. The preparation of the population can be defined as a set of measures aimed at familiarising the population with the principles of self-protection and mutual assistance. The idea is to create and maintain a set of knowledge and skills needed to minimize the negative consequences of emergency events associated with a radiation accident. The desired effect is the development of the necessary competences for providing potential help to oneself and other persons, at least for the necessary time until the arrival of professional help.

The preparation itself consists of two basic elements. The basic cornerstone is the regular education of the population as part of the standard educational process. In addition, other projects and events for the public are implemented, which serve to support or continue, develop and supplement regular education and serve target groups that no longer undergo regular education. These include, for example, discussions, demonstrations, excursions, information of citizens through radio and television stations, creation and distribution of materials to citizens, etc. More information on population preparation can be found on the website <https://www.hzscr.cz/> in the Population Protection section.

E. EXPERIENCE, LESSONS AND MEASURES ADOPTED IN RESPONSE TO RADIOLOGICAL EMERGENCIES OR RADIATION ACCIDENTS OR TO PROBLEMS IDENTIFIED IN EMERGENCY EXERCISES

E.1.1 Experience, Lessons and Measures Adopted in Response to Radiological Emergencies and Radiation Accidents

There was no radiological emergency or radiation accident on the territory of the Czech Republic in the period from the first national report, i.e. from 2014 to 31 December 2020.

For the sake of completeness, it should be noted that a number of extraordinary cases occurred on the territory of the Czech Republic, an overview of which is regularly published in the SÚJB Annual Report - <https://www.sujb.cz/dokumenty-a-publikace/vyrocní-zpravy/>. In terms of radiation protection, an

adequate response was ensured for these cases of emergency. However, these were not the cases which would require activation of the crisis management system on the territory of the Czech Republic.

E.1.2 Experience, Lessons and Measures Adopted in Response to Problems Identified in Emergency Exercises

E.1.2.1 Experience, Lessons and Measures Adopted in Response to Problems Identified in Emergency Exercises Organised at the Government Level

At the state level, the ZÓNA 2015 (Temelín NPP and emergency planning zone), ZÓNA 2017 (Dukovany NPP and emergency planning zone) and ZÓNA 2019 (Temelín NPP and emergency planning zone) exercises have been held since 2014 - see point A.5.1.

All exercises were evaluated by individual training entities and the joint evaluation was prepared in the form of a report, which also contained a list of identified deficiencies and the designation of the entity or entities responsible for their correction and the deadline for this correction. This report was then presented to the Civil Emergency Planning Committee for consideration.

During the evaluation of the ZÓNA 2015 exercise, among other things, the following measures were proposed to eliminate the identified deficiencies:

- a) Establish media security as one of the main priorities for practice during the next ZÓNA exercise, including active involvement of the ÚKŠ media group (today the expert working group for the coordination of crisis communication). As part of the preparation of the exercise, draw up the basic rules of communication between the spokespersons of entities involved in radiation accident management and verify these through the exercise.
- b) Update the off-site emergency plan and, in the process, prepare sample texts with information and instructions for the population to carry out the evacuation, and then incorporate them into the plan and add information about the evacuation routes (municipality, boarding point, receiving centre).
- c) Use modern means of communication for communication. Data that will be further used for emergency management in digital form (can be further processed better), use fax only as an alternative method of communication.
- d) Set up activities and cooperation between the crisis staff of the region and the staff of the Regional Fire and Rescue Service.

The measures to eliminate the identified deficiencies proposed during the evaluation of the ZÓNA 2017 exercise included the following measures:

- a) During the next ZÓNA exercises, plan training activities in the appropriate time dependence for the current chronological interconnection of training tasks, with the possible use of time jumps, which would be uniform for all trainees.
- b) Modify the off-site emergency plan based on the findings gained from the exercise (bus use system, import of potassium iodide, supply of the sheltered population, equipment for the units of the volunteer fire brigade of municipalities, measures at regulatory points, etc.).
- c) To carry out methodical professional training of members of the crisis staff of regions and components of the integrated rescue system in the field of radiation protection.

Based on the evaluation of the ZÓNA 2019 exercise, the following measures were proposed to eliminate the identified deficiencies:

- a) Discuss the developed solutions for individual tasks and developments in the area of fulfilment of the tasks to protect the population in the emergency planning zone at a joint seminar.
- b) Incorporate the findings of the exercise into the national radiation emergency plan.
- c) Modify the off-site emergency plan of the NPP according to the accepted conclusions of the

group for the off-site emergency plan.

- d) Plan the next ZÓNA exercise involving all levels of management with a joint scenario. As part of the ZÓNA 2021 exercise, practice media communication with the population and communication between individual levels of management.

E.1.2.2 Experience, Lessons and Measures Adopted in Response to Problems Identified in Emergency Exercises Organised by the State Office for Nuclear Safety

The SÚJB conducts an evaluation of the activities performed after each emergency exercise of its crisis staff. Deficiencies identified are evaluated and, if there is a deficiency in internal regulations, then the relevant regulation is corrected. If the emergency exercise was carried out as a joint exercise and if deficiencies were identified on the part of the exercising partner, the relevant partner is informed of the identified deficiency along with a request to ensure remedy.

E.1.2.3 Experience, Lessons and Measures Adopted in Response to Problems Identified in Emergency Exercises Organised by NPP Operator or Workplace with Sources of Ionising Radiation

According to Act No. 263/2016 Coll., the operator of a nuclear power plant or workplace with sources of ionising radiation shall evaluate the performed emergency exercises and drills and, based on the result of the evaluation, to take measures to remedy the identified deficiency. According to Decree No. 359/2016 Coll., the operator shall summarize these evaluations made from emergency exercises or drills in the calendar year and send this evaluation to the SÚJB by 31 March of the following calendar year.

F. COMMUNICATION WITH THE PUBLIC

In the matter of communication with the public both within the framework of response preparedness and within the framework of potential response to a radiation accident, a change was made with the adoption of Act No. 263/2016 Coll. This act provided the legal framework for this communication, by establishing specific requirements for both the NPP operator and the SÚJB, Fire and Rescue Service of the Czech Republic, regional authorities, governors and municipal authorities of municipalities with enlarged jurisdiction. The aim of these requirements is to ensure both preliminary information to the population, in particular in the emergency planning zone, about the details related to the potential occurrence of a radiation accident, as well as timely and updated information about the potential course of a radiation accident, its possible impacts and about the protective measures that need to be implemented; this notification must concern all residents affected by this accident. In addition, Decree No. 359/2016 Coll. sets out the scope and form of all information required by law. For the sake of completeness, it should be noted that Act No. 263/2016 Coll. also sets out obligations regarding the notification of a radiation accident that occurred in the Czech Republic abroad, or the notification of a radiation accident that occurred abroad. Schemes of this communication are shown in the national radiation emergency plan (see - <https://www.sujb.cz/nrhp>).

The system used for communication with the public and media has to ensure rapid and accurate evaluation of information, prepare outputs and deliver such outputs quickly and correctly to the public and to the media. This prevents the public and media from receiving incorrect and distorted information. The system used for communication with the public and media is also regularly tested during exercises at all levels.

At all levels of crisis management, the system used for communication with the public and media forms a part of crisis and relevant emergency plans.

The system used for informing the population is tested in both emergency planning zones during regular exercises. Even during the ZÓNA 2015, 2017 and 2019 exercises, communication between individual exercising entities and the public was improved. In the form of a report from the exercises, it was possible to continuously monitor their progress - the reports are available at: <https://www.sujb.cz/kri-zove-rizeni/reportaze-z-havarijnich-cviceni-zona/>.

F.1.1 Government Level

The expert working group for the coordination of crisis communication is used to coordinate crisis communication, secure ÚKŠ documents for informing the public and provide information to the media. The leader of the expert working group for the coordination of crisis communication shall be designated by the chairman of the ÚKŠ, and the members are authorized employees of the authorities whose representatives are members of the ÚKŠ.

The expert working group for the coordination of crisis communication ensures for ÚKŠ in particular the following:

- a) provides communication and information support for the ÚKŠ,
- b) ensures the necessary coordination of the departments represented in the ÚKŠ in providing information to the public and the media,
- c) specifies requirements for organisational and material technical security of communication and information activities in relation to declared crisis situations,
- d) is governed by the Binding Principles of Communication of the ÚKŠ with the media.

F.1.2 Central Authorities

The central administration authorities, through their spokespersons, inform the public, or set up their media groups for this purpose. Each central administration office is responsible for its own information campaign, i.e. publishes its own press releases, holds press conferences, or publishes printed documents containing information for the public and media.

Pursuant to Act No. 263/2016 Coll., the Office shall provide information relating to its competence, i.e. the Office shall provide information both on radiation protection in the case of the occurrence of radiation extraordinary events, and on the origination thereof. In particular, the Office shall:

- a) provide preliminary information to the general population in case of radiation accident about the protective actions and steps to be taken to ensure radiation protection,
- b) ensure information of the general public about the occurrence and the course of a radiation accident which has an impact on the territory of the Czech Republic outside an emergency planning zone and about the steps and measures to be taken during the various stages of development of the radiation accident, unless this information is being provided by another administrative authority,
- c) participate, within the scope of its competence, in the provision of information about the occurrence and the course of a radiation accident within an emergency planning zone,
- d) ensure that the competent regulatory authorities of neighbouring Member States of the Euratom are notified of the occurrence and the course of a radiation accident which has an impact on the territory of the Czech Republic and about the steps and measures to be taken during the various stages of development of the radiation extraordinary event,
- e) provide information about the adoption of measures to protect the general public in the Czech Republic in the event of a radiation accident in the territory of Member States of the Euratom to the European Commission and other Member States of the Euratom which may be affected by these measures and, in accordance with the Czech Republic's international commitments, provide public access to information thus obtained.
- f) ensure notification of regional authorities about the occurrence and the course of a radiation accident outside the territory of the Czech Republic and about the steps and measures to be

taken in the course of the radiation extraordinary event.

The Office presents the information, for example, on its website, in its annual reports or ad hoc, as currently needed. SÚJB also publishes press releases and answers questions from the public. During the Fukushima accident, there was created a special website for this event: <http://otazky-fukushima.cvrez.cz/>. Since 2012, SÚJB has also its own Facebook profile and, since 2020, a Twitter profile.

F.1.3 Fire and Rescue Service of the Czech Republic

According to Act No. 263/2016 Coll., in the event of a radiation incident or radiation accident, the Fire and Rescue Service of the Czech Republic, in the scope of its jurisdiction set out by other legislation, shall immediately inform the public affected by this radiation extraordinary event about the facts of radiation incident or radiation accident, the steps to be taken and the measures to protect the public to be taken, if necessary in that case. In doing so, it cooperates with the governor of the region and the municipal authority of the municipality with enlarged jurisdiction, if it is a radiation incident associated with the suspicion of possible leak of radioactive materials or the spread of ionising radiation from the premises of a nuclear installation or a workplace with a source of ionising radiation, or about the radiation accident.

F.1.4 Regional Authorities and Municipalities with Enlarged Jurisdiction

Pursuant to Act No. 263/2016 Coll., regional authorities in the scope of their jurisdiction set out by other legislation, shall provide preliminary information to the general public in the emergency planning zone in the event of a radiation accident about the measures to protect the general public, which apply to the general public and about the steps to be taken in the case of such situation.

In the case of radiation incident associated with the suspicion of a possible release of radioactive substances or propagation of ionising radiation from the site of the nuclear installation or a workplace with ionising radiation source or radiation accident occurring in the territory of the region, the governor of the region, in the scope of its jurisdiction set out by other legislation, shall immediately inform the public affected by this radiation extraordinary event about the facts of radiation incident or radiation accident, the steps to be taken and the measures to protect the public to be taken, if necessary in that case. Cooperate with the Fire and Rescue Service of the Czech Republic and the municipal authority of the municipality with enlarged jurisdiction in providing such information,

In the case of radiation incident associated with the suspicion of a possible release of radioactive substances or propagation of ionising radiation from the site of the nuclear installation or a workplace with ionising radiation source or radiation accident occurring in the territory of the region, the municipal authority with enlarged jurisdiction, in the scope of its jurisdiction set out by other legislation, shall immediately inform the public affected by this radiation extraordinary event about the facts of radiation incident or radiation accident, the steps to be taken and the measures to protect the public to be taken, if necessary in that case. In doing so, it cooperates with the Fire and Rescue Service of the Czech Republic and the governor of the region.

The regional authorities and the municipalities with enlarged jurisdiction inform the public through their spokespersons, or set up their media groups and workplaces for public communication. These workplaces are staffed by trained personnel in communications and equipped with several telephone lines and internet access.

Each regional authority and each municipality with enlarged jurisdiction are responsible for their own information campaign, i.e. publish their own press releases, hold press conferences, or publish printed documents containing information for the public and media.

The components of the Integrated Rescue System provide the necessary information with respect to an extraordinary event and to rescue and remedy works in progress to the media and to the public.

F.1.5 NPP Operator

The NPP operator shall inform the public through its spokesperson, publish its own press releases, hold press conferences, or publish printed documents containing information for the public and media. In the case of a radiation extraordinary event, the operator shall set up an integrated press centre in the information centre.

Pursuant to Act No. 263/2016 Coll., the NPP operator shall provide the population in the emergency planning zone with basic information in the event of a radiation accident⁵. Basic information is published in the form of a calendar and updated once every two years. This information is distributed to all residents in the emergency planning zone. The basic information includes instructions on how the residents should act after the warning in the emergency planning zone in the case of the necessity of sheltering, the application of iodine prophylaxis and the announcement of preparation for evacuation and, among other things, graphic representations and images are used in the text to make this information interesting and understandable.

NPP Operator In the case of a radiation accident, the NPP operator shall immediately inform the general public affected by this radiation accident about the facts and expected development of the radiation accident, Emphasis is mainly placed on fast, effective and transparent crisis communication, which uses the possibilities and communication channels of all departments of the Group to the maximum extent. Based on the findings of the exercise, an integrated press centre was set up with the aim of uniform crisis communication in the event of a radiation extraordinary event. In the case of declaration of radiation extraordinary event, spokespersons of the concerned authorities (SÚJB, Fire and Rescue Service, Police of the Czech Republic, etc.) are present in the premises of the Dukovany NPP or Temelín NPP after the activation of the integrated press centre. In the event that press conferences cannot take place in the premises of the Dukovany NPP or Temelín NPP due to unfavourable radiation situation, alternative premises are prepared (Fire and Rescue Service of the South Moravian Region, Fire and Rescue Service of the South Bohemian Region).

In addition to press conferences, the NPP operator has other means of communication at its disposal, which were created and distributed on the basis of the knowledge from the events at the Fukushima NPP and IAEA recommendations:

- a) Intervention cards ETE and intervention cards EDU, which contains basic terminology, information and contact data for the case of extraordinary events at Temelín NPP and Dukovany NPP.
- b) Dark Web – a “hidden” microsite prepared, including version for mobile phones and tablets, containing the instructions to the public for an extraordinary event at NPP, including room for current messages and instructions.
- c) Dark Facebook profile “Nuclear Event” prepared non-public website for social networking service “Facebook”, which can be activated and interconnected with the existing profile “For Nucleus” in the case of an extraordinary event at Temelín NPP.
- d) An information system for residents in the vicinity of the NPP, which complements the existing warning system and enables the population to be informed via SMS and e-mail about siren tests, technology tests associated with noise exposure, or other important information about things affecting the environment.
- e) On-line portals “Aktivní zóna” (Dukovany NPP) and “Temelínky” (Temelín NPP) containing current information and interesting facts about events at the NPPs and basic electronic information in case of a radiation accident

⁵ Basic information was previously published as the so-called “Public Protection Manual”

The employees of the ČEZ Group, who are members of an on-call organisation of emergency response, were also trained in the control of such communication means.

ANNEX 1 LIST OF LEGISLATION

List of legislation as of 31 December 2020

Atomic Act and its Implementing Regulations

- a) Act No. 263/2016 Coll., the Atomic Act, as amended by Act No. 183/2017 Coll., and Act No. 403/2020 Coll.
- b) Decree of the State Office for Nuclear Safety No. 359/2016 Coll., on details of ensuring radiation extraordinary event management,
- c) Decree of the State Office for Nuclear Safety No. 360/2016 Coll., on radiation situation monitoring,
- d) Decree of the State Office for Nuclear Safety No. 408/2016 Coll., on management system requirements,
- e) Decree of the State Office for Nuclear Safety No. 422/2016 Coll., on radiation protection and security of radionuclide source,
- f) Decree No. 377/2016 Coll., on the requirements for the safe management of radioactive waste and on the decommissioning of nuclear installations or category III or IV workplaces

Crisis Legislation (Selected Legislation)

- a) Constitutional Act No. 110/1998 Coll., on Security of the Czech Republic, as amended by Constitutional Act No. 300/2000 Coll.,
- b) Act No. 239/2000 Coll., on Integrated Rescue System and on Amendment to Certain Related Acts, as amended by Act No. 320/2002 Coll., Act No. 20/2004 Coll., Act No. 186/2006 Coll., Act No. 306/2008 Coll., Act No. 151/2010 Coll., Act No. 375/2011 Coll., Act No. 303/2013 Coll., Legal Action No. 344/2013 Coll., Act No. 64/2014 Coll., Act No. 183/2017 Coll., Act No. 225/2017 Coll., Act No. 403/2020 Coll., Act No. 415/2021 Coll., and Act No. 374/2021 Coll.,
- c) Act No. 240/2000 Coll., on Crisis Management and on Amendment to Certain Related Acts (Crisis Act), as amended by Act No. 320/2002 Coll., Act No. 127/2005 Coll., Act No. 112/2006 Coll., Act No. 110/2007 Coll., Act No. 306/2008 Coll., Act No. 153/2010 Coll., Act No. 430/2010 Coll., Act No. 375/2011 Coll., Act No. 333/2012 Coll., Act No. 303/2013 Coll., Act No. 64/2014 Coll., Act No. 320/2015 Coll., Act No. 323/2016 Coll., Act No. 183/2017 Coll., Act No. 205/2017 Coll., 14/2021 Coll., Act No. 544/2020 Coll., Act No. 36/2021 Coll., and Act No. 261/2021 Coll.,
- d) Act No. 241/2000 Coll., on Economic Measures during Crisis Situations and on Amendments to Certain Related Acts, as amended by Act No. 320/2002 Coll., Act No. 354/2003 Coll., Act No. 237/2004 Coll., Act No. 413/2005 Coll., Act No. 444/2005 Coll., Act No. 230/2006 Coll., Act No. 296/2007 Coll., Act No. 281/2009 Coll., Act No. 153/2010 Coll., Act No. 76/2012 Coll., and Act No. 183/2017 Coll.
- e) Act No. 133/1985 Coll., on Fire Protection, as amended by Act No. 425/1990 Coll., Act No. 40/1994 Coll., Act No. 203/1994 Coll., Act No. 163/1998 Coll., Act No. 71/2000 Coll., Act No. 237/2000 Coll., Act No. 320/2002 Coll., Act No. 413/2005 Coll., Act No. 186/2006 Coll., Act No. 281/2009 Coll., Act No. 341/2011 Coll., Act No. 350/2011 Coll., Act No. 350/2012 Coll., Act No. 303/2013 Coll., Legal Action No. 344/2013 Coll., Act No. 64/2014 Coll., Act No. 320/2015 Coll., Act No. 229/2016 Coll., Act No. 225/2017 Coll., Act No. 415/2021 Coll., and Act No. 374/2021 Coll.,
- f) Government Regulation No. 462/2000 Coll., on Implementation of Some Provisions of the Crisis Act, as amended by Government Regulation No. 36/2003 Coll., and No. 431/2010 Coll.,
- g) Government Regulation No. 463/2000 Coll., on Setting the Rules for Participation in International Rescue Operations, Granting and Receiving Humanitarian Aid, and Reimbursement of Expenses Incurred by Legal Persons and Natural Persons Pursuing Business Activities for Protection of Inhabitants, as amended by Government Regulation No. 527/2002 Coll.,

- h)** Government Regulation No. 465/2008 Coll., on Calling in the Troops of the Armed Forces of the Czech Republic to Fulfil the Tasks of the Police of the Czech Republic in Radiological Emergencies at Nuclear Power Plants,
- i)** Government Regulation No. 431/2010 Coll., amending Government Regulation No. 462/2000 Coll., to implement § 27 (8) and § 28 (5) of Act No. 240/2000 Coll., on Crisis Management and on Amendment to Certain Related Acts (the Crisis Act), as amended,
- j)** Government Regulation No. 432/2010 Coll., on Criteria for Determining Critical Infrastructure Elements, as amended by Government Regulation No. 315/2014 Coll., and No. 61/2022 Coll.,
- k)** Decree of the Ministry of the Interior No. 328/2001 Coll., on Some Details in Ensuring of the Integrated Rescue System, as amended by Decree No. 429/2003 Coll., and Decree No. 377/2021 Coll.
- l)** Decree of the Ministry of the Interior No. 247/2001 Coll., on the Organisation and Operation of Fire Protection, as amended by Decree No. 226/2005 Coll., Decree No. 200/2012 Coll., and Decree No. 118/2019 Coll.,
- m)** Decree of the Ministry of the Interior No. 380/2002 Coll., for the Preparation and Performance of Tasks for Population Protection.

Multilateral International Conventions and Agreements with IAEA

Part of the valid Czech legislation in the given area includes the following international treaties signed by the Czech Republic (or the former Czechoslovak Socialistic Republic and later the Czech and Slovak Federal Republic):

- a)** Convention on Early Notification of a Nuclear Accident (Vienna, 26 September 1986, Communication of the Ministry Foreign Affairs No. 116/1996 Coll.),
- b)** Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency (Vienna, 26 September 1986, Communication of the Ministry Foreign Affairs No. 115/1998 Coll.).

Selected Legislation Related to the Activities of SÚJB

- a)** Act No. 281/2002 Coll., on Some Measures Related to Prohibition of Bacteriological (Biological) and Toxin Weapons and on Amendments to Trades Licensing Act, as amended by Act No. 186/2004 Coll., Act No. 413/2005 Coll., Act No. 296/2007 Coll., Act No. 124/2008 Coll., Act No. 223/2009 Coll., Act No. 227/2009 Coll., Act No. 64/2014 Coll., Act No. 243/2016 Coll., Act No. 183/2017 Coll., and Act No. 253/2017 Coll.
- b)** Act No. 106/1999 Coll., on Free Access to Information, as amended by Act No. 101/2000 Coll., Act No. 159/2000 Coll., Act No. 39/2001 Coll., Act No. 413/2005 Coll., Act No. 61/2006 Coll., Act No. 110/2007 Coll., Act No. 32/2008 Coll., Act No. 254/2008 Coll., Act No. 274/2008 Coll., Act No. 227/2009 Coll., Judgement of the Constitutional Court No. 123/2010 Coll., Act No. 375/2011 Coll., Act No. 167/2012 Coll., Act No. 181/2014 Coll., Act No. 222/2015 Coll., Act No. 298/2016 Coll., Act No. 301/2016 Coll., Act No. 368/2016 Coll., Act No. 205/2017 Coll., Act No. 111/2019 Coll., and Act No. 12/2020 Coll.,
- c)** Act No. 19/1997 Coll., on Some Measures Concerning Chemical Weapons Prohibition, as amended by Act No. 249/2000 Coll., Act No. 356/2003 Coll., Act No. 186/2004 Coll., Act No. 186/2006 Coll., Act No. 124/2008 Coll., Act No. 138/2008 Coll., Act No. 41/2009 Coll., Act No. 223/2009 Coll., Act No. 227/2009 Coll., Act No. 281/2009 Coll., Act No. 64/2014 Coll., Act No. 183/2017 Coll., and Act No. 336/2020 Coll.,
- d)** Act No. 255/2012 Coll., on Inspection (Inspection Code), as amended by Act No. 183/2017 Coll.,
- e)** Act No. 500/2004 Coll., on Code of Administrative Procedure (Code of Administrative Procedure), as amended by Act No. 413/2005 Coll.
- f)** Act No. 384/2008 Coll., Act No. 7/2009 Coll., Act No. 227/2009 Coll., Act No. 167/2012 Coll.,

Act No. 303/2013 Coll., Act No. 250/2014 Coll., Act No. 243/2016 Coll., Act No. 298/2016 Coll., Act No. 183/2017 Coll., Act No. 225/2017 Coll., Act No. 176/2018 Coll., Act No. 12/2020 Coll., and Act No. 403/2020 Coll.,

- g)** Act No. 505/1990 Coll., on Metrology, as amended by Act No. 119/2000 Coll., Act No. 13/2002 Coll., Act No. 137/2002 Coll., Act No. 226/2003 Coll., Act No. 444/2005 Coll., Act No. 230/2006 Coll., Act No. 481/2008 Coll., Act No. 223/2009 Coll., Act No. 155/2010 Coll., Act No. 18/2012 Coll., Act No. 85/2015 Coll., Act No. 264/2016 Coll., and Act No. 183/2017 Coll.,
- h)** Act No. 373/2011 Coll., on Specific Health Services, as amended by Act No. 167/2012 Coll., Act No. 47/2013 Coll., Act No. 82/2015 Coll., Act No. 205/2015 Coll., Act No. 264/2016 Coll., Act No. 298/2016 Coll., Act No. 65/2017 Coll., Act No. 183/2017 Coll., Act No. 202/2017 Coll., Act No. 310/2017 Coll., and Act No. 205/2020 Coll.

ANNEX 2 NON-LEGISLATIVE DOCUMENTS

1. Central Alarm Plan of the Integrated Rescue System
2. Alarm Plan of the Integrated Rescue System of the Vysočina Region
3. Alarm Plan of the Integrated Rescue System of the South Moravian Region
4. Alarm Plan of the Integrated Rescue System of the South Bohemian Region

IZS documentation – see:

<https://www.hzscr.cz/clanek/dokumentace-izs-587832.aspx?q=Y2hudW09NQ%3d%3d>

1. Off-site emergency plan of Dukovany NPP
2. Off-site emergency plan of Temelín NPP
3. Agreement on the Planned Assistance on Request between (Ref. No. MV-146429-2/PO-IZS-2013) concluded between the Ministry of the Interior - General Directorate of Fire and Rescue Service of the Czech Republic and the Ministry of Defence - General Staff of the Armed Forces of the Czech Republic
4. Statute of the Central Crisis Staff, approved by Government Resolution
5. Statute of the National Security Council

Statutes – see:

<https://www.vlada.cz/cz/pracovni-a-poradni-organy-vlady/brs/brs-uvod-3851/>

<https://www.vlada.cz/cz/ppov/brs/pracovni-vybory/ustredni-krizovy-stab/ustredni-krizovy-stab-51792/>

1. Type Plan Pursuant to the Resolution of the National Security Council No. 295/2002 – Radiological Emergencies
2. National Radiation Emergency Plan

TP NRHP – see:

<https://www.sujb.cz/nrhp>

ANNEX 3 UNIFORM SYSTEM OF WARNING AND INFORMATION

The uniform system of warning and information has been developed in the Czech Republic since 1991. The system consists of a network of alarm sirens and local information systems (so called municipal radios) of so called end warning elements ensuring immediate warning of the population, further of a system for transfer of signal and information and of the infrastructure for control of alarm sirens and notification of persons. The uniform system of warning and information is a fully selective system, which means that it is possible to choose activation of all end warning elements or of individual sirens or local information systems depending on the extent of the extraordinary event and on the requirements on warning and information of the population.

If an extraordinary event is imminent or emerges, the population is warned through the “General Alert” warning signal. The signal is sounded by warble tone of siren during 140 seconds and it can sound three consecutive times at approximately three-minute intervals. The signal is immediately followed by spoken emergency information notifying the population of the data on the imminent or emerged extraordinary event and of the measures for protection of population. The provision of such emergency information is performed through the end warning elements, fitted with the module for transmission of voice information, or the emergency information is transmitted through mass communication media.

There are several types of sirens: the most modern ones - electronic, fitted with voice module; the electric rotatory ones - with remote control receiver; the electric rotatory ones, controlled locally by button; and local information systems enabling transmission of warning signal and passing of voice emergency information and included in the remote control system.

The availability of the warning system is examined by acoustic test carried out usually on first Wednesday of each month on the whole territory of our republic. On that day, at 12:00 p.m., the sirens sound with the continual testing tone during 140 seconds; electronic sirens notify the citizens also by voice.

At present, the Fire and Rescue Service of the Czech Republic has more than 9,600 sirens under its competence (most of them can be remotely controlled), covering with warning signal more than 90 % of populated territory of the Czech Republic.

Electrical and electronic sirens for timely warning of population are deployed in the emergency planning zone surrounding the NPP. Those end warning elements are controlled both by the Fire and Rescue Service of the Czech Republic and by the actual JEZ, and they are owned by ČEZ a.s., in compliance with the Atomic Act.

ANNEX 4 CONTENT OF THE OFF-SITE EMERGENCY PLAN FOR NUCLEAR INSTALLATION OR CATEGORY IV WORKPLACE

The off-site emergency plan is structured as follows

- A. Information part,
- B. Operative part, and
- C. Plans for specific activities.

A. INFORMATION PART

(1) The information part includes

- a) General description of the nuclear installation or category IV workplace,
- b) Characteristics of the area, particularly from geographical, demographical and climatic point of view, and description of the infrastructure in the area,
- c) List of municipalities, including overview of total population and list of legal persons and natural persons engaged in business activities, which are included in the off-site emergency plan,
- d) Results of analyses of possible radiation accidents and possible radiological effects on the population, animals, and the environment,
- e) System of classification of radiation accidents according to the on-site emergency plan,
- f) Requirements for the protection of the population and the environment in relation to intervention levels in a radiation accident,
- g) Description of the structure of the organisation of emergency preparedness in the emergency planning zone, including specification of competencies of its components to perform the necessary activities, and
- h) Description of the notification and warning system, which includes the relations to licence holder and information transfer within the emergency preparedness organisation in the emergency planning zone.

B. OPERATIVE PART

(1) The operative part provides an overview of the prepared measures that are implemented by the licence holder after notification of the suspected occurrence or upon confirmation of the occurrence of a radiation accident. The Fire and Rescue Service of the region shall elaborate a solution for individual measures depending on the anticipated radiation situation and its expected time sequence. The implementation of individual measures shall be ensured according to plans for specific activities, depending on the mode of the spread of leaked radioactive substances.

(2) The operative part includes

- a) Tasks of the administrative authorities, municipalities and components concerned by countermeasures included in the off-site emergency plan,
- b) Method for coordinating radiation accidents management,
- c) Criteria to announce appropriate crisis situations if off-site emergency plan is apparently not sufficient to deal with the radiation accident,
- d) Method for ensuring information flows in management of the remedy of the consequences of radiation accident, and
- e) Principles of activities during the spreading or the potential spreading of radiation accident consequences outside the emergency planning zone and cooperation between authorities and municipalities concerned by countermeasures included in the off-site emergency plan.

C. Plans for specific activities

(1) For the purpose of specific activities to carry out rescue and remedial work in the territory of the

region, a plan is being drawn up for the following:

- a) Notification,
- b) Warning of population,
- c) Rescue and remedial work,
- d) Sheltering of the population,
- e) Iodine prophylaxis,
- f) Evacuation of persons,
- g) Individual protection of persons,
- h) Decontamination,
- i) Monitoring,
- j) Regulation of persons movement and transport,
- k) Trauma area,
- l) Emergency plan for veterinary measures,
- m) Regulation of food, feedstuff and water distribution and consumption,
- n) Measures in case of death of persons in the contaminated area,
- o) Public order and safety ensuring,
- p) Communication with the public and mass information media.

(2) Notification plan, which means the immediate transmission of information about an extraordinary event, contains

- a) Names of persons and names of institutions, addresses and methods of contact to
 1. Operation information centres and operation centres of basic components operating in the area of the region,
 2. Competent employees of the region assigned to the regional authority,
 3. Competent employees of other components,
 4. Any other regional or municipal authorities affected by the planned measures,
 5. Other local administrative authorities and municipalities affected by the planned measures,
 6. Central authorities and operation centres with national scope of authority affected by the planned measures,
- b) Listing of the notification system provided by licensee, and
- c) Activities of each emergency component and competent employees of the region assigned to the regional authorities, employees of municipalities with enlarged jurisdiction assigned to the municipal authority of the municipality with enlarged jurisdiction and employees of municipalities assigned to the municipal authority, which are carried out after notification, for example, announcement of alarm or security of collection.

(3) Warning plan, which is based on the warning documents provided by the licence holder, contains

- a) Main method of population warning including description of activities to be carried out by the population after warning, and
- b) Alternative method of population warning.

(4) Rescue and remedy work plan contains

- a) Need for predetermined forces and means, which is based on the local alarm plan,
- b) List of components assigned to fulfil tasks in a radiation accident at a nuclear installation or category IV workplace,
- c) Method of notification and calling of such components,
- d) Protective and technical equipment,
- e) Predetermination for fulfilment of specific tasks including specific potential deployment,
- f) Probable site of their deployment,
- g) Route of arrival and departure of components,

- h)** Method of intervention management,
 - i)** Maximum time of deployment of components in the place of intervention with regard to threat to health of the components,
 - j)** Provision of material, technical and medical services to the components, and
 - k)** Method of decontamination and dosimetry control of individuals and equipment.
- (5) **Shelter plan** with regard to the conditions set out by special legislation contains
- a)** Methods of suitable sheltering of persons in the emergency planning zone,
 - b)** Principles concerning behaviour of population in sheltering, and
 - c)** Principles of supply of foodstuffs and water to sheltered population.
- (6) **Plan of iodine prophylaxis**, which is carried out under the conditions set out by special legislation, contains the number of prophylactics, methods of distribution, change and use of iodine prophylaxis.
- (7) **Plan of population evacuation**, which is carried out under the conditions set out by special legislation, shall be drawn up for the emergency planning zone. The evacuation plan contains
- a)** Evacuation principles,
 - b)** Expected numbers of evacuated persons,
 - c)** Scope of evacuation measures,
 - d)** Evacuation security,
 - e)** Authorities designated for management of evacuation and method of their notification,
 - f)** Division of responsibility for evacuation, and
 - g)** Monitoring of evacuated persons and decontamination centres.
- (8) **Plan for individual protection of population** contains
- a)** Possibilities and way of using improvised means for the protection of respiratory tract, eyes and body surface,
 - b)** Amount and structure of individual protection means, places of their storage and ensuring of their issue (if their use is expected),
 - c)** Method of management of used individual protection means.
- (9) **Decontamination plan** contains
- a)** List of decontamination centres and buildings,
 - b)** Method of decontamination of persons and clothing, buildings, transportation and other means and the area in the emergency planning zone,
 - c)** Forces and means for decontamination, method of notifying and deploying them,
 - d)** Radiation control after decontamination, and
 - e)** Method for ensuring spare clothing for contaminated persons.
- (10) **Monitoring plan** contains the method for submission of reports on monitoring results obtained from the National Radiation and Monitoring Network of the Czech Republic and the method of handling and disclosure of information obtained from licence holder.
- (11) **Plan for regulation of the movement of persons and vehicles** contains
- a)** Determination of the boundaries of enclosed area,
 - b)** Determination of the points of entry and exit,
 - c)** Method of regulating the movement of persons,
 - d)** Forces and means for ensuring the regulation of the movement of persons and vehicles, notification, deployment and responsibility for task accomplishment, and
 - e)** Tasks related to regulation of the movement of persons and vehicles.
- (12) **Trauma plan**, which regulates the method of medical examination and medical care, contains
- a)** Principles and procedures for providing medical assistance to the population or individuals, who were exposed to radiation in connection with a radiation accident (external exposure,

internal contamination) or affected by a combination of polytraumas, and to persons who ensure measures to reduce exposure or who carry out rescue work and who were exposed to radiation in connection with a radiation accident (external exposure, internal contamination) or were affected by a combination of polytraumas, and

- b) Method for providing medical assistance to evacuated or sheltered population.

(13) **Emergency plan of veterinary measures** to protect livestock in a radiation accident contains

- a) Numbers and location of livestock,
- b) Measures prepared for the survival of livestock and method for securing them,
- c) Livestock to be evacuated, their numbers, routes of transport, methods of their treatment and places of their subsequent location,
- d) Method of veterinary sorting and decontamination of animals, and
- e) Measures for livestock affected by radiation accident including removal and destruction of fallen livestock.

(14) **Foodstuff, feedstuffs and water regulation and distribution plan** contains

- a) Method of controlling the contamination of foodstuffs, feedstuffs and water with radionuclides,
- b) Method for issuing regulation instructions,
- c) Variants of possible regulation,
- d) Method of disposal of foodstuffs and feedstuffs contaminated with radionuclides, and
- e) Method for ensuring and distributing safe foodstuffs, water and feedstuffs.

(15) **Plan for measures in case of death of persons in the contaminated area** contains the method for

- a) Search for and identification of the deceased,
- b) Handling of contaminated remains of the deceased, and
- c) Burial of persons.

(16) **Plan for ensuring public order and security** includes the method of security and the activity to be carried out by competent authorities and municipalities.

(17) **Plan for communication with the public and mass media** contains

- a) Overview of contact information of persons from mass media,
- b) Texts or records of television and radio emergency information including method of its preparation and update,
- c) Frequencies and alternative frequencies of radio stations,
- d) Method for verifying the penetration of warning broadcasts,
- e) Alternative method of public information,
- f) Forms, methods and procedures in providing information to the population on actual threat and subsequently adopted measures to protect the population, and
- g) Organisational and material security of press centre.

ANNEX 5 CONTENT OF THE REGIONAL EMERGENCY PLAN

The regional emergency plan is structured as follows

- A. Information part,
- B. Operative part, and
- C. Plans for specific activities.

(2) The regional emergency plan contains text documents supplemented by graphic documentation consisting of maps, graphs and diagrams.

A. INFORMATION PART

(1) Characteristics of the region include

- a) geographical part,
- b) demographical part,
- c) climatic and hydrological part, and
- d) description of the infrastructure.

(2) For individual types of extraordinary events, the facts established by the analysis of the potential occurrence of extraordinary events shall be stated, indicating

- a) Place of potential origination,
- b) Probability of origination,
- c) Extent and threat depending on time and other conditions,
- d) List of municipalities including overview of total population and list of legal persons and natural persons engaged in business activities included in the emergency plan of the region,
- e) Threat to the population,
- f) Anticipated damages,
- g) Anticipated consequences caused by an extraordinary event,
- h) Principles for carrying out rescue and remedial work,
- i) Estimated amount of forces and means for rescue and remedial work,
- j) Description of the relevant part (for a specific type of extraordinary event) of the structure of the emergency preparedness organisation of the region, including indication of the powers of the components,
- k) Description of the usable part (for a specific type and location of extraordinary event) of the notification and warning system within the framework of the organisation of rescue and remedial work, and the protection of the population,
- l) Potential rehabilitation of the anticipated consequences of an extraordinary event, stating the responsibility for the implementation of individual rehabilitation measures, and
- m) List of extraordinary events that exceed the borders of the region or may occur in the territory of the region or may spread from other regions.

(2) If there is a possibility of one type of extraordinary event occurring in several places in the region and under similar local conditions, the most dangerous variant will be described in detail; for other variants, only differences and specifics will be stated.

B. OPERATIVE PART

Forces and means for rescue and remedial work, with regard to the assistance requested under § 20 (1) and (2) of Act No. 239/2000 Coll., shall be indicated only if they are not included in the alarm plans, while the regional alarm plan shall be attached to the regional emergency plan. The forces and means for rescue and remedial work, which are not included in the regional alarm plan, shall be indicated with the following information:

- a) Assistance provided to neighbouring regions includes

1. Extraordinary events in which assistance will usually be implemented,
 2. Forces and means intended for assistance,
 3. Method of calling forces and means intended for assistance and their involvement in rescue and remedial work, and
 4. Responsibility for sending,
- b) Assistance that can be provided from neighbouring regions includes
1. Extraordinary events in which assistance will usually be required,
 2. Forces and means intended for assistance,
 3. Method of calling forces and means intended for assistance and their involvement in rescue and remedial work, and
 4. Responsibility for sending,
- c) Assistance that can be provided from the central level includes
1. Extraordinary events in which assistance will usually be required,
 2. Forces and means intended for assistance,
 3. Method of calling forces and means intended for assistance and their involvement in rescue and remedial work, and
 4. Responsibility for sending,
- d) Method of notification of extraordinary events and communication.

C. Types of plans for specific activities

(1) For the purpose of specific activities to carry out rescue and remedial work in the territory of the region, a plan is being drawn up for the following:

- a) Notification,
- b) Trauma,
- c) Population warning,
- d) Population sheltering,
- e) Individual protection of population,
- f) Population evacuation,
- g) Emergency survival of the population,
- h) Monitoring,
- i) Emergency plan of veterinary measures,³⁾
- j) Public order and security,
- k) Protection of cultural monuments,
- l) Hygiene and epidemiological measures,
- m) Communication with the public and mass information media,
- n) Waste removal.

(2) The notification plan includes a method for

- a) Transmission of initial information about an extraordinary event,
- b) Notification and calling of other components,
- c) Information of the governor and mayors of municipalities with enlarged jurisdiction, and
- d) Submission of information about the extraordinary event to the regional authority, municipal authorities of municipalities with enlarged jurisdiction, other administration authorities and municipal authorities of the municipalities affected by the notification.

(3) The trauma plan contains

- a) Procedures of medical facilities⁴⁾ and administration authorities and the organisation of providing emergency medical care and medical assistance to the population affected by an

extraordinary event or to persons carrying out rescue and remedial work, if they were affected in connection with the extraordinary event,

- b) Method for providing medical assistance to evacuated and sheltered population, and
- c) Principles of public health protection inside and outside the premises of an extraordinary event, the health protection schemes of the emergency components of the integrated rescue system and the affected medical facilities.

(4) The population warning plan contains

- a) Overview of notification centres and warning end elements,
- b) Method of warning of the population about the potential danger,
- c) Warning signal and its meaning and alternative method of warning,
- d) Method of forwarding emergency information,
- e) Method of informing about the end of the threat, and
- f) Division of responsibility for the implementation of population warning.

(5) The population shelter plan contains

- a) Principles of sheltering,
- b) Overview of permanent shelters in the administrative districts of municipalities with enlarged jurisdiction, indicating the type of shelter and the capacity of sheltered persons,
- c) Overview of suitable spaces for building improvised shelters, and
- d) Division of responsibility for sheltering of the population.

(6) The plan for individual protection of population contains

- a) Method of improvised protection of respiratory tract, eyes and body surface,
- b) Quantity and structure of individual protection means for selected categories of persons and place of their storage,
- c) Security and method of issuing individual protection means, and
- d) Division of responsibility for the implementation of individual protection of the population.

(7) The population evacuation plan contains

- a) Evacuation principles,
- b) Scope of evacuation measures,
- c) Evacuation security,
- d) Authorities designated for management of evacuation and method of their notification, and
- e) Division of responsibility for the implementation of population evacuation.

(8) The plan for emergency survival of population contains

- a) Emergency accommodation,
- b) Emergency food supply,
- c) Emergency supply of drinking water,
- d) Emergency basic services to the population,
- e) Emergency energy supplies,
- f) Organising humanitarian aid, and
- g) Division of responsibility for the implementation of measures for the emergency survival of the population.

(9) The monitoring plan contains

- a) Overview of stationary and mobile devices and their location,
- b) Monitored quantities for monitoring,
- c) Method of evaluation and transmission of the determined values, and
- d) Division of responsibility for monitoring.

(10) The emergency plan of veterinary measures contains

- a) Overview of prepared emergency veterinary measures and the method of their implementation,
- b) Forces and means to secure them,
- c) Division of responsibility for their implementation, and
- d) Method of carrying out disinfection of persons, animals and means.

(11) The plan of public order and security contains

- a) Method for ensuring public order and security, and
- b) Division of responsibility for the implementation of measures to protect public order and security.

(12) The plan of protection of cultural monuments contains

- a) Overview of movable and immovable cultural monuments,
- b) Method of ensuring their protection against the effects of accidents, and
- c) Division of responsibility for the implementation of the protection of cultural monuments.

(13) The plan of hygiene and anti-epidemic measures contains

- a) Overview of prepared hygiene and anti-epidemic measures,
- b) Method of their implementation,
- c) Forces and means to secure them,
- d) Emergency plan for the case of outbreak of dangerous infectious diseases, and
- e) Division of responsibility for the implementation of planned hygiene and anti-epidemic measures.

(14) The plan of communication with the public and mass information media contains

- a) Overview of contact information of persons from mass media,
- b) Texts or recordings of television and radio emergency information
- c) Frequencies and alternative frequencies of radio stations,
- d) Method for verifying the penetration of information,
- e) Alternative method of public information,
- f) Forms, methods and procedures in providing information to the population on actual threat and subsequently adopted measures to protect the population,
- g) Organisational and material security of press centre, and
- h) Division of responsibility for communication with the public and mass media.

(15) The plan for removal of waste generated during an extraordinary event contains

- a) Method of waste removal and components performing waste removal,
- b) Overview of landfills, incinerators and other waste and hazardous waste disposal facilities,
- c) Division of responsibility for waste removal, and
- d) Designation of supervision during waste removal.

ANNEX 6 EU LEGISLATION FOR TRADE REGULATION

- 1) Council Regulation (EURATOM) No. 3954/87 of 22 December 1987 laying down maximum permitted levels of radioactive contamination of foodstuffs and of feedingstuffs following a nuclear accident or any other case of radiological emergency,
- 2) Commission Regulation (EURATOM) No. 944/89 of 12 April 1989 laying down maximum permitted levels of radioactive contamination in minor foodstuffs following a nuclear accident or any other case of radiological emergency,
- 3) Council Regulation (EURATOM) No. 2218/89 of 18 July 1989 amending Regulation (EURATOM) No. 3954/87 laying down maximum permitted levels of radioactive contamination of foodstuffs and of feedingstuffs following a nuclear accident or any other case of radiological emergency,
- 4) Commission Regulation (EURATOM) No. 770/90 of 29 March 1990 laying down maximum permitted levels of radioactive contamination of feedingstuffs following a nuclear accident or any other case of radiological emergency,
- 5) Council Regulation (EEC) No. 2219/89 of 18 July 1989 on the special conditions for exporting foodstuffs and feedingstuffs following a nuclear accident or any other case of radiological emergency,
- 6) Council Decision 87/600/EURATOM, on Community arrangements for the early exchange of information in the event of a radiological emergency,
- 7) Regulation (EC) No. 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety,
- 8) Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom,
- 9) Codex Alimentarius.

ANNEX 7 HUMANITARIAN AID

Procedure for the case of origination of an extraordinary event or crisis situation abroad, decision-making process applied in case of deployment of forces and means in international rescue operations and in delivery of humanitarian aid to foreign countries

1. PRIMARY INFORMATION

The ÚSÚ, usually the Ministry of the Interior or the Ministry of Foreign Affairs receives the information on a serious extraordinary event abroad (in compliance with the relevant international treaty or international convention, from an international organisation (UN-OCHA, ERCC, NATO-EADRCC, IAEA, etc.) or from another foreign body (e.g. a representative office), from the media, etc.), or it receives direct solicitation for help from the affected state.

2. EVALUATION OF INFORMATION

The state administration bodies consult the available information with each other and evaluate them. At the same time, they assess whether the Czech Republic is able to provide the required form of aid. The information on an extraordinary event is consulted between the Ministry of the Interior or the Ministry of Foreign Affairs, or possibly with other ministries and ÚSÚ; the method of provision of aid is technically prepared and the predetermined forces and means are informed.

3. DECISION

After assessing the situation and finding that the provision of aid is appropriate and possible, the ministers of the interior and of foreign affairs are informed and required to make a decision. In case of a request on sending rescuers or material aid, the minister of the interior suggests possible variants or commodities that can be provided by the Czech Republic. The minister of foreign affairs decides on the release of the relevant funds.

4. ACTIVATION OF FORCES AND MEANS

After the decision on provision of aid in specified financial amount, the predetermined forces and means are activated and the specialists are gathered, the sending of material aid or rescue unit is prepared, the documentation for sending of aid is prepared, the commander of the unit or of the convoy is appointed, the foreign currency means are issued and other details are specified. In order to accelerate this stage, the process runs according to prepared model procedures with indispensable situation-specific deviations.

5. IMPLEMENTATION

The material aid or the rescue unit leaves the territory of the state in specified manner and gets involved in on-site rescue works or fulfilment of further tasks.

ANNEX 8 LIST OF BILATERAL AGREEMENTS

1. Agreement between the Government of the Czechoslovak Socialist Republic and the Government of the Republic of Austria to Settle Issues of Common Interest in Connection with Nuclear Safety and Radiation Protection, Vienna, 25. October 1989, entered into effect on 23 July 1990, Communication of the Federal Ministry of Foreign Affairs No. 431/1990 Coll.
2. Protocol between the Government of the Czech Republic and the Government of the Republic of Austria Amending the Agreement between the Government of the Czechoslovak Socialist Republic and the Government of the Republic of Austria to Settle Issues of Common Interest in Connection with Nuclear Safety and Radiation Protection, Prague, 20 December 2007, entered into effect on 1 July 2008, Communication of the Ministry of Foreign Affairs No. 44/2008 Coll.
3. Agreement between the Government of the Czech and Slovak Federal Republic and the Government of the Federal Republic of Germany to Settle Issues of Common Interest in Connection with Nuclear Safety and Radiation Protection, Prague, 30 May 1990, entered into effect on 2 August 1990, Communication of the Federal Ministry of Foreign Affairs No. 432/1990 Coll.
4. Agreement between the Government of the Czech and Slovak Federal Republic and the Government of the Republic of Hungary on Exchange of Information and Cooperation in the Field of Nuclear Safety and Radiation Protection, Vienna, 20 September 1990, entered into effect on 15 May 1991, Communication of the Federal Ministry of Foreign Affairs No. 447/1991 Coll.
5. Agreement between the Government of the Czech and Slovak Federal Republic and the Government of the United States of America on Cooperation in Peaceful Uses of Nuclear Energy, Vienna, 13 June 1991.
6. Agreement between the Government of the Czech Republic and the Government of the Russian Federation on Cooperation in the Field of Nuclear Energy, Moscow, 4 December 1994, entered into effect on 4 April 1995, Communication of the Ministry of Foreign Affairs No. 171/1995 Coll.
7. Amendment to the Agreement between the Government of the Czech Republic and the Government of the Russian Federation on Cooperation in the Field of Nuclear Energy of 4 December 1994, Moscow, 15 April 1999, entered into effect on 15 April 1999, Communication of the Ministry of Foreign Affairs No. 154/1999 Coll.
8. Agreement between the Government of the Czech Republic and the Government of Canada on Cooperation in Peaceful Uses of Nuclear Energy, Ottawa, 22 February 1995, entered into effect on 22 February 1995, Communication of the Ministry of Foreign Affairs No. 69/1995 Coll.
9. Agreement between the Government of the Czech Republic and the Government of the Slovak Republic on Cooperation in the Field of State Supervision of Nuclear Safety of Nuclear Installations and State Supervision of Nuclear Materials, Bratislava, 8 March 1996, Communication of the Ministry of Foreign Affairs No. 117/1996 Coll.
10. Agreement between the Government of the Czech Republic and the Government of Ukraine on Cooperation in the Field on Nuclear Energy and Nuclear Industry, Kiev, 30 June 1997, Communication of the Ministry of Foreign Affairs No. 241/1997 Coll.
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16. Agreement between the Government of the Czech Republic and the Government of Australia on Cooperation in Peaceful Uses of Nuclear Energy and the Transfer of Nuclear Material, Prague, 27 July 2001, entered into effect on 17 May 2002, Communication of the Ministry of Foreign Affairs No. 78/2002 Coll.
17. Agreement between the Czech Republic and the Government of the Republic of Poland on Early Notification of a Nuclear Accident and on Exchange of Information on Peaceful Uses of Nuclear Energy, Nuclear Safety and Radiation Protection, Vienna, 27 September 2005

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ANNEX 10 LIST OF ABBREVIATIONS AND TERMS

Abbreviations

BRS	National Security Council
ČR	Czech Republic
EU	European Union
HŘS	Emergency control centre
Fire and Rescue Service of the Czech Republic	Fire and Rescue Service of the Czech Republic
HZSp	Internal Brigade of the Fire and Rescue Service
IOHO	Internal Emergency Response Organisation
IZS	Integrated rescue system
NPP	Nuclear Power Plant
KŠ	KŠ
IAEA	International Atomic Energy Agency (IAEA)
MRS	Radiation situation monitoring
Ministry of the Interior	Ministry of the Interior
MV-GŘ HZS ČR	Ministry of the Interior - General Directorate of Fire and Rescue Service of the Czech Republic
NRHP	National Radiation Emergency Plan
OPIS	Operational and information centre
POHO	Internal Emergency Response Organisation
SSZP	Specialised medical care centre
SÚJB	State Office for Nuclear Safety
SÚJCHBO	National Institute for Nuclear, Chemical and Biological Protection
SÚRO	National Radiation Protection Institute
TPS	Technical Support Centre
ÚKŠ	Central Crisis Staff
ÚSÚ	Central authorities
ZHP	Emergency planning zone

Definitions

Regional emergency plan	Plan to carry out rescue and remedial work in the territory of the region
Coordinating regional authority	Regional authority which, in the case that the emergency planning zone extends to the territory of more than one region, coordinates the elaboration of the off-site emergency plan and the common solution to an extraordinary event, and on the territory of which the source of danger is located.
Crisis preparedness	System of preparedness to deal with extraordinary events and preparedness to deal with crisis situations for cases of crisis situations of various kinds
Crisis legislation	Act No. 238/2000 Coll., Act No. 239/2000 Coll., Act No. 240/2000 Coll., and Act No. 241/2000 Coll., as amended
Off-site emergency plan	Plan to carry out rescue and remedial work in the vicinity of the source of danger
