REGULATION ON EMERGENCY PLANNING AND EMERGENCY PREPAREDNESS IN CASE OF NUCLEAR AND RADIOLOGICAL EMERGENCIES

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CHAPTER I
GENERAL PROVISIONS

Article 1

(1) This regulation establishes:

1. Conditions and order for development of emergency plans;
2. Persons who implement the emergency plans and their obligations;
3. Actions and measures for mitigation and liquidation of the consequences of a nuclear or radiological accident, hereinafter "accident" ;
4. Methods for informing the general public;
5. Order of maintaining and testing the emergency preparedness.

(2) With this regulation the order of interaction between the licensee or the relevant permit holder, according to the Act of Safe Use of Nuclear Energy (ASUNE) and the central and local executive body, is also established in implementation of the measures, laid down in art.1 (1) p.3.

Article 2

(1) The actions and measures for mitigation and liquidation of the consequences of an accident are planed, determined and implemented on the basis of radiation risk assessment and the type of facility, category of the radioactive source (in accordance with Annex No 1), site or practice creating the risk and also the emergency class, hereinafter "emergency". The method for calculating the category of a radioactive source is given in Annex No 1.

(2) For optimizing the requirements for actions and measures pursuant to art.2 (1) and for the purposes of the emergency planning, the sites, facilities and practices are categorized in one of the following threat categories:

1. Threat category I – nuclear facilities in which postulated initiating on-site events, including events of very low probability, could lead to an accident with significant release of radioactive substances in the environment and cause severe deterministic health effects off-site.
2. Threat category II – nuclear facilities in which the on-site emergency events could lead to an accident for which the projected dose could exceed the dose limits for the population off-site, which requires implementation of urgent protective measures on-site.

3. Threat category III – nuclear facilities and sites with radioactive sources in which postulated on-site emergency events could lead to an irradiation or radioactive contamination of the environment above the permitted thresholds, which requires implementation of urgent protective measures on-site.

4. Threat category IV – practices with nuclear materials and sources of ionizing radiation (SIR) that could lead to an accident in place, which cannot be foreseen or determined in advance, such as transport of nuclear materials and radioactive substances, practices with gamma flaw detectors and other portable dangerous sources, including practices with dangerous sources which are illegally obtained.

5. Threat category V – facilities and practices which are not directly related to SIR, but for which there is high probability of contaminating the production and uncontrolled spread of radioactive substances during their exploitation as a result of accident in threat categories I and II, or in other matters which can require implementation of protective measures.

(3) In any particular threat category the following facilities, sites and practices are included:

1. In threat category I:

a) nuclear reactors with thermal power greater than 100 MW;

b) spent fuel pools which contain total activity of ^{137}Cs greater than $0{,}1.10^{18}$ Bq or nuclear materials in a quantity, equivalent to the inventory of a reactor core with thermal power 3000 MW;

c) nuclear facilities and sites with disperse radioactive substances (liquids, gases, powdered, flammable, soluble, pyrophoric materials) in quantities enough to lead to severe deterministic effects off-site;

2. In threat category II:

a) nuclear reactors with thermal power greater than 2 MW and less than or equal to 100 MW;

b) spent fuel pools which contain spent fuel which requires active cooling;

c) facilities located on-site in a distance less or equal to 500 m from the protected zone boundaries in which could occur uncontrolled chain reaction;

d) nuclear facilities and sites with disperse radioactive substances (liquids, gases, powdered, flammable, soluble, pyrophoric materials) in quantities which can require implementation of urgent protective measures off-site;

3. In threat category III:

a) nuclear reactors with thermal power less than or equal to 2 MW;

b) facilities located on-site in a distance greater than 500 m from the protected zone boundaries in which could occur uncontrolled chain reaction;

c) nuclear facilities and sites with disperse radioactive substances (liquids, gases, powdered, flammable, soluble, pyrophoric materials) in quantities which can require implementation of urgent protective measures on-site;

d) facilities with radioactive sources which can cause external exposure with dose rate greater than 10 mGy/h at a distance of 1 m from the source if the source's shield is damaged;

4. In threat category IV:
   a) transport of radioactive sources corresponding to categories 1, 2 or 3 which are dangerous if not controlled;
   b) practices with mobile radioactive sources which can cause external exposure with dose rate greater than 10 mGy/h at a distance of 1 m from the source if the source's shield is damaged;
   c) practices with mobile dangerous radioactive sources, including artificial satellites containing radioactive sources;
5. In threat category V:
   a) Facilities for recycling and melting metal waste and scrap;
   b) national border check points, including airports and ports;

Article 3

Depending on the possibility of control the processes during an accident and the severity of its consequences, and for the purposes of emergency response, an emergency in facilities, sites and practices is classified into one of the following classes:

1. "General emergency" Class is an accident including actual or potential release of radioactive substances and exposure of the personnel and population, which requires implementation of urgent protective measures for the population; pronouncement of General emergency requires urgent protective measures to be promptly taken to reduce the accident's consequences and to protect the personnel and population;
2. "Site area emergency" Class is an accident including a significant reduction of protection level of personnel and persons in the radiation protection area; pronouncement of a Site area emergency requires immediate actions to be promptly taken to mitigate the consequences of the accident and to protect the personnel and also requires preparation for taking protective measures for the population;
3. "Facility emergency" Class is an accident including a significant reduction of the protection level of personnel without any risk for the population; pronouncement of a Facility emergency requires immediate actions to be promptly taken to mitigate the accident's consequences and to protect the personnel;
4. "Alert" Class is given when events occur, the result of which is that protection level is uncertain or significantly decreased; pronouncement of an Alert requires actions to be taken to evaluate the situation and measures to be taken to increase the preparedness for implementation of the emergency plans;
5. "Other emergencies" Class such as find, loss or theft of a dangerous source, including re-entry of satellites containing dangerous sources.

Article 4

(1) To assure promptly and adequate response when an emergency occurs, according to the threat category and the emergency class, emergency planning zones are defined.

(2) Emergency planning zones referred to a thread category I are:

1. On-site emergency planning zone – protected area which covers the territory of the nuclear facility or site and also is under direct control of the licensee.
2. Precautionary protective action planning zone – the territory around the nuclear facility or site, in which boundaries the central and territorial executive bodies create an organization for implementation of immediate protective measures when General emergency is pronounced, i.e. before or right after a release of radioactive substances in the environment, in order to prevent and restrict the risk of severe deterministic effects for members of the population.
3. Urgent protective action planning zone – the territory around the nuclear facility or site, in which boundaries the central and territorial executive bodies create an organization for implementation of urgent protective measures right after a General emergency occurs, taking into account the results of radiation monitoring and the injured installation's condition as abiding by the stated levels for averted dose.

(3) Emergency planning zones referred to a thread category II are:

1. On-site emergency planning zone – protected area;
2. Urgent protective action planning zone.

(4) For nuclear facilities or sites referred to a threat category III only Precautionary protective action planning zone is defined.

(5) Size, boundaries and administration of the Precautionary protective measures zone are defined in accordance with art.111 of ASUNE.

(6) The zones according to (2) are divided into 16 sectors of 22.5° each, which are named with the first 16 letters of the Latin alphabet starting from North clockwise.

(7) The zones for emergency planning for threat category IV and in case of occurrence of emergency in a random or undetermined place are:

1. Secured zone – the territory around the place of emergency occurrence, which is denoted with tapes and signs or in other suitable way and it is under:
   a) direct control of the licensee or the relevant permit holder when practicing a licensed activity or under the direct control of the Ministry of Interior's (MI) body in cases when the operator is in objective inability to create that zone.
   b) direct control of the MI's body in cases of malicious activities;
2. Zone with supervised access around the Secured zone, which zones are created according to (7) p.1.

(8) In case of emergency according to (7):

1. the outer boundary of the secured zone is differentiated where:
   a) dose rate lower or equal to 100 μSv/h and a radiation control is required when leaving it;
   b) surface contamination which does not exceed 1000 part./cm^2.min for beta-radionuclides and low radiotoxic alpha-emitters and 100 part./cm^2.min for all other radiotoxicity groups of alpha-emitters
2. the outer boundary of Zone with supervised access is differentiated where dose rate is less or equal to 1,0 μSv/h and no humans or animals are allowed in;

(9)In case of emergency no food and drink consumption or smoking is allowed in the zones complied to (7).

Article 5

(1)The licensee or the relevant permit holder of facilities, sites and practices of threat categories I and II in accordance with the local governors and mayors, who's territory the boundary of the emergency planning zone (in accordance to art.4 (2) and (3)) is in, set on public places information panels with a scheme of zone's boundaries and evacuation roads.

(2)The licensee or the relevant permit holder (as in (1)) in accordance with the local governors and mayors who's territory the boundary of the emergency planning zone (in accordance to art.4 (2) and (3)) is in, organize marking with public-for-all and durable signs on suitable places on the boundaries of the zone.

(3)The expenses for the activities pointed in (1) and (2) are on the account of the licensee or the relevant permit holder.

CHAPTER II

EMERGENCY PLANNING

Section I

General provisions

Article 6

(1) Emergency planning is an activity of establishing a system of measures into emergency plan for mitigation and liquidation of the consequences of an accident and for creating and maintaining an emergency preparedness.

(2) Emergency planning is based on the analyses of potential scenarios of occurrence and development of accidents and assessment of risk of the radiation consequences due to these accidents for the personnel, population and environment.

(3) Implementation of measures in the emergency plan targets mitigation and reduction of emergency's consequences on human's health, quality of life, property and environment, and is also a base of recovering the normal conditions for social and economic life after liquidating the consequences of an emergency.

Article 7

(1) The licensee or the relevant permit holder develops on-site emergency plan which is based on the maximum possible radiation consequences for the personnel, public and environment if emergency occurs and determines the measures for mitigating and liquidating the consequences of an emergency, functional duties of the personnel for actions in an emergency, as well as the cooperation with executive bodies in accordance with the emergency plan.

(2) The plans according to art.7 (1) are developed in coordination with all other existing plans for physical protection and other emergency plans.

Article 8

(1) The central executive bodies in accordance with their competence develop and participate in an off-site emergency plan of sites, facilities and practices of all threat categories, which is a component of the National Emergency Plan for Disaster Protection and which defines the size of the emergency planning zones, specific duties by competency, cooperation and protective measures for the population in case of an emergency.

(2) The off-site emergency plan determines the order of assistance to the licensee or the relevant permit holder and in compliance with the bilateral and multilateral international agreements which are enacted for Republic of Bulgaria, the order of international assistance in case of emergency.

(3) The plan according to (2) is developed in compliance with all other existing plans, including those for physical protection.

(4) The Minister of Interior organizes and coordinates the plan development according to (1) and sends it for co-ordination in accordance with Rules of Procedures of the Council of Ministers and its administration, conducted with Decree No 229 of the Council of Ministers of 2009 (State Gazette No.78 of 2009).

(5) The Minister of Interior imports the pursuant off-site emergency plan according to (4) for adoption. The plan is adopted by a decision of the Council of Ministers.

(6) A copy of the adopted plan according to (5) is provided to every department which has obligations in accordance with the plan.

(7) The resources of the plan are defined in a separate Annex to the plans in accordance with Art.16. Keeping them up do date is a responsibility of the Ministries and departments which have obligations on them and the control is implemented by the Secretary general of MI and by the Director of Directorate General Fire Safety and Civil Protection-MI (DGFSCP-MI). These alterations are not subjects of adoption by the Council of Ministers.

(8) The Minister of Interior via regional managements of DGFSCP-MI coordinates the development of the plans in accordance with (1) for threat categories I and II which are located on their territory.

Article 9

(1) Territorial executive bodies develop emergency plans which are based on the plan in accordance with art.8 (1) and with the on-site plans of licensees or relevant permit holders of facilities and practices of threat categories I and II which are located on their territory.

(2) Executive bodies in accordance with (1) define in their emergency plans the specific obligations on competency, order of cooperation, assisting help if needed and protective measures in case of emergency.

(3) The Minister of interior via regional departments of DGFSCP-MI coordinates the development of plans in accordance with (1) for threat categories I and II which are affirmed with an order of relevant governor.

Article 10

The Emergency plans in accordance to Art.7-9 should provide:

1. situation assessment and decision-making for mitigating the radiation influence due to an emergency on the personnel, population and environment;
2. estimated dose assessment for the personnel, population, members of the emergency response team and people participating in implementation of protective measures;
3. prompt and appropriate actions for protection of the personnel in all emergencies that may occur, including the measures for physical protection of the nuclear facility or site with sources of ionizing radiation (SIR) and radiation monitoring;
4. taking into account the analyses in accordance with Art.6 (2);
5. define the emergency planning zones and motivate their boundaries in accordance with Art.4;
6. preparation and maintenance of educated and qualified personnel, capable of implementing the measures for defining, mitigating and liquidating the consequences of the emergency;
7. prompt announcement and gathering of emergency response teams;
8. safety and protection of the personnel and the emergency response teams;
9. continuous control of the irradiation of members of the emergency response teams, personnel and population in accordance with the specific circumstances and defining and assessment of irradiation dose;
10. first aid of casualties or irradiated persons, including transport assurance to healthcare institutions;
11. technical assistance to the personnel involved with practices for mitigating and liquidating the consequences of the emergency;
12. criteria for ceasing the emergency actions;
13. supervised access to emergency area.

Section II

On-site emergency plan

Article 11

(1) For developing the on-site emergency plan the licensee or the relevant permit holder prepares:
1. analysis of possible accidents in the nuclear facility or site with SIR, which could lead to radioactive releases in the environment taking into account the meteorological measurements as well;
2. analysis of the radioactive releases in the environment in case of accidents in accordance with p.1. and assessment of the accident consequences for the personnel, population and environment;
3. scenarios for development of the accidents in accordance with p.1.

(2) Depending on the threat category of an actual facility or practice the licensee or the relevant permit holder plans and provides the implementation of measures for mitigating

and liquidating the consequences of accidents, prevention and control of the accidents and mitigating their consequences on-site, including:

1. Regaining the control over the facility, site or practice, including the combination of emergency and other extreme situations as explosion, fire, flooding, earthquake;
2. Interaction with the executive bodies;
3. Performing of radiation and meteorological measurements in the emergency planning zones.

(3) The licensee or the relevant permit holder performs periodically an overview and assessment of the on-site emergency plan as analyzing and reviewing all possible emergencies, the technical and scientific development, own and international experience.

Article 12

(1) The on-site emergency plan should be in accordance with the requirements in art.10 as well as to provide:

1. preparedness for implementation of the plan before the nuclear fuel delivery or radioactive sources on-site and in any other moment;
2. prompt detection and precise and prompt classification of the emergency;
3. response in the initial moment of the emergency by persons with the necessary training and qualification who can detect the presence of radioactive substances and their characteristics, to assess the possible consequences and to perform the requirements for notification;
4. the presence of a particular responsible person with the required training and qualification, who to classify the emergency and to activate immediately the on-site action plan;
5. the necessary communication tools for the person in accordance with p.4. for prompt notification of the personal, the Nuclear Regulatory Agency (NRA), Directorate General Fire Safety and Civil Protection of the Ministry of Interior (DGFSCP-MI), the relevant territorial unit of MI and the local autonomy and administration bodies;
6. prompt notification in any moment of all persons on-site and in the precautionary action zone if emergency occurs;
7. sufficient and reliable secured ways (roads) for evacuation with visible, durable and available symbols and the necessary continuous ventilation and light signalization when applicable;
8. isolation of the emergency area;
9. cooperation in all phases of the emergency to the executive bodies in implementing the protective measurements for the population and personnel;

(2) For threat categories I and II the on-site emergency plan should also provide:

1. access for the emergency teams to a qualified medical care immediately after the emergency occurs;
2. permanent control of the nuclear facility or site with SIR in case of an emergency and bringing them into safe and stable condition.

Article 13

For implementation of the on-site emergency plan the licensee or the relevant permit holder is obligated to ensure in any time:

1. access in cases of all possible emergencies to technical tools for radiation monitoring which are necessary for assessing the class of emergency, tracking and predicting its development;
2. necessary shelters for the personnel in the protected area;
3. necessary means for individual protection, power supply, communication and notification tools for the personnel;
4. necessary tools for notifying the population in the zone, defined in the on-site emergency plan;
5. technical tool, including backup supplies, for managing the emergency, for personnel protection and for radiation monitoring in accordance with unified emergency methodologies for conducting the measurements and their maintenance.

Article 14

(1) On the site of the nuclear facility the licensee or the relevant permit holder builds and maintains at least one emergency centre in the protected area, which is situated in a most protected from emergency's impacts place.

(2) The emergency centre is located in a place different from the Control room of the nuclear facility and is designed to provide protection to the working personnel from the emergency's impacts.

(3) The emergency centre is equipped with:

1. necessary technical tools, methodologies and programs for analysis, assessment and prediction of the emergency's impacts;
2. geographical maps in appropriate scale;
3. tools for radiation monitoring;
4. individual means for protection for the personnel in the emergency centre;
5. connection and communication tools;
6. the on-site emergency plan and all technical documentation needed for managing the emergency;

(4) The emergency centre is provided with backup and emergency power supply, which ensure flawless work of the technical systems and tools.

(5) All technical tools available in accordance with (3) and (4) are periodically checked and are maintained in operable condition.

Article 15

The licensee or the relevant permit holder ensures in any time all human and financial resources and technical tools necessary for implementation of the on-site emergency plan.

Section III

Off-site emergency plans

Article 16

(1) Bodies in accordance with art.8(1) within their competences, develop plans for population protection in case of nuclear or radiological emergency (off-site emergency plans) in the base of:

1. analysis of all possible emergencies, including transboundary release, and the emergency's consequences;
2. analysis of the numbers and characteristics of the population in the emergency planning zones;
3. all possible scenarios for development of the emergencies in accordance with the on-site emergency plans.

(2) Off-site emergency plans are developed on national, regional and local level in order given in art.9 of the Disaster Protection Act (DPA) on paper and electronically.

(3) The results of the analyses in accordance with (1) are given to the executive bodies for preparing their actions in case of emergency, to acknowledge the emergency teams with the possible radiation risks and for maintaining an emergency preparedness.

(4) The off-site emergency plans are subject to a periodic review and evaluation as it is ensured that all possible scenarios, the development of technology and science, own and international experience are taken into account.

Article 17

The off-site emergency plan should correspond to the requirements of art.10, as well as to ensure:

1. precise and clear allocation of the responsibilities of executive bodies for actions in case of emergencies;
2. precise and clear definition of the actions of all emergency teams according to different types of emergency class;
3. coordination between the emergency teams and other specialized units of executive bodies;
4. prompt notification and periodical information to the population, specialized international organizations and/or other countries, the diplomatic corps in the country and the delegations of Republic of Bulgaria in other countries in case of emergency;
5. allocation, distribution and usage of the individual means of protection, drugs, sanitary and other medical materials, as well as drugs of stable iodine for the population;
6. radiation monitoring of contamination with radioactive substances across the country and at border checkpoints for animals, foodstuff, water, agricultural products, fodders and soils;

7. gathering, processing and evaluating the data from the individual and radiation monitoring and prediction of the emergency's development;
8. treatment and dispensary observation of irradiated persons;
9. prompt determination of the additional criteria, secondary levels and temporary standards of emergency irradiation, when the development of the emergency requires so;
10. precautionary and long-term protective measures for animals, plants, foodstuff, water, agricultural products, fodders and soils for prevention of contamination;
11. decontamination of humans, animals, property, transport and technical tools, equipment and delivery of necessary decontamination detergents, clothes and shoes for the population who leaves the emergency planning zones;
12. procession of agricultural products, foodstuff, fodders and soils contaminated with radioactive substances, including their long-term storage or destruction if necessary;
13. supplying with drinking water and food for the emergency teams and population in the emergency area;
14. public, transport and guarding order, including guarding of property, during implementation of rescuing and emergency-restorative actions and during implementation of protective measures for the population and environment;
15. guarding and admission regime in the border checkpoints and in checkpoints located on the borders of the emergency planning zones, including radiation monitoring when leaving the zones;
16. usage of national system for early warning and notification in case of disasters, local automatic systems for early warning and notification in case of disasters, companies which provide electronic information webs and/or services, as well as the tools for mass information for the purposes of emergency planning;
17. organization of the safe management of radioactive waste as a result of the emergency;
18. gathering, processing and analyzing all other information which could assist the prompt and effective implementation of the emergency plans;

Article 18

For implementation of the off-site emergency plan in case of emergency the executive bodies must ensure at any time:

1. access to all emergency planning zones for the emergency teams;
2. engineering maintenance of the emergency teams;
3. access to expert consultation for the executive bodies with responsibilities in implementing the emergency plan;
4. maintenance to ensure the operable capability of the tools for measurements as well as their metrological control;

5. transport and equipment for implementation of the protective measures for the population and environment;
6. reserves of decontamination means, food and clothes, individual means for protection and other materials of implementing the emergency plan;
7. all necessary technical tools for the work of the emergency teams and for protection of their members, including their maintenance.

Article 19

The responsibilities of the executive bodies for planning the actions in case of emergency, for implementation of the off-site emergency plan and for maintaining an emergency preparedness are defined in accordance with this document and the off-site emergency plan.

Article 20

(1) Common responsibilities of the executive bodies in the frame of their competency are:
1. insurance of the available information for radiation and meteorological situation in the country via their technical tools and systems for radiation monitoring and via their specialized laboratories in case of an emergency or transboundary release;
2. do an initial analysis and evaluation of the information, connected with the emergency in view of predicting its consequences or in case of transboundary release and development of protective measures proposals for the population and environment;
3. maintaining an emergency team for actions in case of emergency;
4. insurance and maintenance of necessary tools for individual and collective protection, power supply, communication and notification, including backup tools for its employees who have responsibilities in implementation of the plan;
5. informing the population for mitigating and liquidating the consequences of the emergency;
6. planning of the technical and financial means for participating in actions for mitigation and liquidation of the consequences of the emergency.

(2) The emergency teams in accordance with (1) p.3. are ensured with the necessary methodologies and programs for analysis, evaluation and prediction of the radiological consequences, as well as with technical, transport and communication tools and means for individual protection.

Article 21

(1) The Council of ministers implements the common management of protection of the population and environment in case of emergency.

(2) In case of an emergency for the purposes of operative management and coordination of protective actions, the Prime-minister establishes with an order the National Headquarter for Coordination and Control (NHCC) and headquarters for coordination and control attached to ministers and departments which nominal composition is defined with an order of the relevant minister or chief of the headquarter.

(3) The NHCC is managed by the Prime-minister or by a minister defined by the Prime-minister and members which are leaders of ministries and departments.

(4) The NHCC does:

1. analysis and evaluation of the situation, staff and condition and components of the Unified Rescue System (URS) for conduction of Life-saving Urgent Emergency-Restoration Works (LUERW) in case of emergency;
2. organizing and coordinating the actions of ministers and other central and local executive bodies, as well as the legal entities and sole traders whose obligations include functions of planning, preparedness and implementation of actions in case of emergency;
3. control of implementation of tasks and measures for master the emergency;
4. informing the Prime-minister, the President of Republic of Bulgaria and the Chairman of the National Assembly about the course of implementing the protective actions;
5. informing the media and population about the development of the emergency, the measurements for its mitigation and mastery and for the necessary protective measures and actions for the population;

(5) At the NHCC an interdepartmental information group is established for supporting its work in implementing the informational activity whose nominal composition is defined by an order of the leader of NHCC by a proposal from its members.

(6) The Council of ministers creates permanently acting Council of Experts for supporting the activities of the NHCC of experts from the department which have obligations in accordance with art.20.

(7) The Minister of Interior:

1. leads, coordinates and controls the conduction of LUERW on protection of the population and environment;
2. defines protective measures for the population in case of nuclear or radiological accident in cooperation with the Minister of health, Minister of environment and water and the Chairman of NRA;
3. controls the executive bodies in regard to creating and maintaining an emergency preparedness;
4. gathers and processes the incoming data, which characterize the emergency or transboundary release and the radiation situation and makes predictions for their development and the consequences for the population;
5. approves training programs for the population about behavior and actions in case of emergency and for specialized training of the executive bodies on implementation of the off-site emergency plan;
6. organizes, coordinates and defines the order for information distribution in accordance with Chapter III Part 4;
7. guides methodically the training of the population on actions in case of emergency;
8. maintains and ensures the work of post for radiation monitoring and notification of the territorial executive bodies;

9. organizes and maintains a system of notification and cooperation between the executive bodies, legal entities and the population for arose accidents;
10. gathers, processes and analyses all data which characterize the radiation situation in the country in case of emergency and gives them to the NHCC and other executive bodies;
11. organizes the implementation of the protection measures for the population;
12. organizes the development of common plans with neighboring countries for actions in case of accidents;
13. controls the maintenance in operable condition of the individual and collective means for protection of the population;
14. creates and maintains a reserve of individual means for protection of the population;
15. organizes temporary storage of radioactive substances which owner is unknown, till their handover to State Enterprise Radioactive Waste (SE RAW);
16. implements the functions of a doubled (backup) point of connection in accordance with the Convention on Early Notification of a Nuclear Accident and with Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency;
17. plans, organizes and ensures the public peace and the traffic organization when performing LUERW in case of emergency in accordance with the off-site emergency plan;
18. plans and organizes teams and means for fire safety assurance and fire fighting in the affected areas by the emergency;
19. plans and ensures security and crossing regime in border checkpoints and dispatching checkpoints across the borders of the emergency planning zones;
20. organizes the guarding, public peace and property keeping in sites of national economy and settlements during evacuation in case of emergency.

(8) The Chairman of NRA:

1. implements the functions of a central body and a contact point in accordance with Art.5.p.13 of ASUNE;
2. provides information from other countries and international organizations as well as the information included in Chapter III Part 4;
3. in case of emergency notifies and periodically informs international organizations, neighboring countries as well as countries which could be affected;
4. gathers and processes the incoming data which characterize the emergency or transboundary release and the radiation situation, makes predictions for the development of the emergency and its consequences for the population and gives them to DGFSCP-MI;
5. implements control of the emergency preparedness of the licensees and the relevant permit holders separately or together with DGFSCP-MI;

(9) In case of emergency the information in accordance with (8) p.2 and 3 depending on the situation and capabilities and as far as this information does not threat the national security, contains the following:

1. moment and place of emergency’s occurrence;

2. data of the nuclear facility, site with SIR or practice;
3. presumable or defined reason for the emergency and prediction of its development in regard to release of radioactive substances in the environment;
4. common characteristics of released radioactive substances, including the probable physical and chemical form, actual amounts, constitution and other characteristics of the release;
5. information about the meteorological and hydrological conditions and predictions;
6. results of the radiation monitoring and analyses of foodstuff, fodders and drinking water;
7. undertaken or planed measures for protection and information of the population;
8. predictions of the dispersion of radioactive substances released in the environment and their deposition;

(10) The Minister of Health:

1. defines health standards for protection of persons in cases of emergency;
2. ensures personnel, technical and financial working of the structural units for emergency planning;
3. maintains constantly a team of specialists available for actions in case of radiological emergency;
4. evaluates the predicted and averted doses and proposes to the Council of Ministers radiation-hygienic protective measures for the population, including:
   a) usage of drugs with stable iodine for the population in accordance with the criteria for making decisions;
   b) evacuation conduction;
   c) performance of decontamination of the affected persons, incoming in the medical institutions;
   d) requirements to the public and personal hygiene;
   e) regime of feeding the risk groups of the population.
5. performs medical assurance of persons in case of nuclear or radiological emergency, as assuring specialized diagnostic and expert help of irradiated persons during nuclear or radiological emergency and medical certification of all irradiated persons;
6. in cooperation with MI processes a radiation control of the people, passing through the checkpoints of the emergency planning zones and the state border;
7. for saving a human life or for prevention of bigger irradiation in case of nuclear or radiological emergency, the state health control bodies can permit as an exception performance of activities from volunteers in excess the stated limits of exposure in accordance with the Health Act;
8. in decision taking for implementation of protective measures in coordination with the Chairman of NRA proposes additional criteria, secondary levels and temporary standards for emergency exposure, including that approves temporary additional standards for the limits of radioactive food contamination;

9. performs final assessment of the irradiation type and radiation load after finishing the liquidation works, including final identification of the source, area, type and degree of the nuclear or radiological emergency;
10. develops a long-term prediction of possible radiation consequences, evaluates the radiation-determined risk and proposes precautionary protective measures for the population;
11. gathers, processes and evaluates the data from the radiation measurements and gives the results to CM, MI and the Chairman of NRA, including:
    a) gamma-background measurements and measurements of drinking water contamination with radioactive substances, as ensures expert evaluation of their availability for consumption;
    b) the iodine isotopes containment in the thyroid gland and the whole body activity of representative and risk groups of the population;
    c) assessment of the effective dose received of individuals, groups and the whole population.
12. performs registration, medical approval and outpatient observation of the irradiated persons as a result of nuclear or radiological emergency;
13. organizes the provision of medical and health institutions with drugs for treatment of irradiated people;
14. exchanges information in case of nuclear or radiological emergency with the World Health Organization (WHO) and with the Health Security Committee (HSC).

(11) the Minister of Environment and Water:

1. maintains the National Automatic System for Continuous Control of Gamma-background (NASCCG) across the territory of Republic of Bulgaria and administrates the Central Station of NASCCG;
2. plans and coordinates the actions of laboratories for radiation measurements from the system of Ministry of Environment and Water (MEW) in case of nuclear or radiological accident;
3. maintains and assures personnel, technical and financial the functioning of specialized unit for emergency response;
4. controls the radioactive contamination over the components of the environment in case of nuclear or radiological accident;
5. predicts the radiation consequences for the environment, tracks, analyses and evaluates the migration of radionuclides which are ecologically significant;
6. gathers, processes and evaluates the data of measurements and analyses of the radioactive contamination of environmental components and proposes measures for protection of environment in case of nuclear or radiological accident;
7. gives data for the condition of the environment in accordance with the signed international treaties.

(12) The Minister of Defense:

1. maintains specialized units for help assistance when conducting LUERW in case of nuclear or radiological accident;

2. plans and organizes the reception and treatment of irradiated and injured people in military hospitals in accordance with the off-site emergency plan.

(13) the Minister of Agriculture and Food:

1. plans and coordinates the actions of laboratories for radiation measurements from the system of Ministry of Agriculture and Food and the Academy of Agriculture, which implement control of contamination with radioactive substances of foods, fodders and soils in case of emergency;
2. plans, organizes and conducts radiation monitoring and control of animals, plants, soils and agricultural production, including all checkpoints in the country;
3. plans and organizes urgent and long-term protective measures for animals, foods and fodders of radioactive contamination in accordance with the off-site emergency plan;
4. ensures measurements of gamma-background and measurements of radioactive contamination of food products for the population, as ensures an expert evaluation of their consumption availability;
5. defines technologies for procession of foods, fodders, soils and other agricultural production, contaminated with radioactive substances, and the regime of usage of agricultural lands in the affected areas due to an emergency;
6. gathers, processes and evaluates the data from the radiation control on sites of farming and proposes protective measures.

(14) the Minister of Foreign Affairs:

1. plans and organizes the prompt notification of in case of nuclear or radiological emergency and periodically informing of the diplomatic corps and the representatives of Republic of Bulgaria in other countries;
2. organizes the requesting and receiving assistance from other countries in accordance with signed international treaties;
3. organizes the request for receiving technical assistance and if necessary, evacuation of Bulgarian citizens, happened upon surroundings of radiation danger in foreign countries.

(15) Minister of Transport, Information Technologies and messages:

1. organizes and ensures the usage of the national communication system for notification, management and cooperation of the executive bodies and emergency team still the liquidation of the consequences of the emergency;
2. plans and organizes the transport assurance during evacuation of the population, agricultural animals and material values in accordance with the off-site emergency plan;
3. creates organization for maintaining the emergency preparedness of transport firms and units in accordance with the off-site emergency plan.

(16) Bulgarian Academy of Science via the National Institute of Meteorology and Hydrology (NIMH) and the Institute for Nuclear Research and Nuclear Energy (INRNE) assists the executive bodies in case of nuclear or radiological emergency, as:

1. implements control of the gamma-background and contamination with radioactive substances of air, atmospheric depositions, rainfalls, surface- and underground waters and plans the hydro-meteorological assurance of LUERW in case of emergency;

2. ensures the functioning of specialized unit for emergency response;
3. forecasts the atmospheric processes and occurrence to determine the distribution and disposal of radioactive substances in case of emergency, as develops and adjusts, for the country conditions, models for dispersion of radioactive substances in the atmosphere and water pools;
4. organizes and implements exchange of data and forecasts of meteorological and radiological situation with other countries and international organizations in accordance with the signed bilateral and multilateral treaties and agreements;
5. implements long-term predictions for the radiation situation in the country after occurrence of nuclear or radiological emergency, gathers, processes and analyses the data of hydro-meteorological and radiation situation in the country and gives them to DGFSCP-MI;
6. participates in decision-making for implementation of protective measures for the population.

(17) University of Sofia "St. Kliment Ohridski" via the Faculties of Physics and Chemistry:

1. provides scientific and methodic assistance in implementation of analyses and evaluations of nuclear or radiological situation;
2. ensures the functioning of specialized unit for emergency response;
3. predicts the radiological consequences, analyses and evaluates data of the radiological situation and proposes decisions for implementation of protective measures for the population;
4. in case of emergency does specialized radiological measures with available devices (hardware) and gives the results to DGFSCP-MI.

(18) State Enterprise "Radioactive Waste" (SERAW):

1. ensures the functioning of specialized unit for emergency response, including technical tools for working in heavy radiation situation;
2. participates in the radiation measurements for situation assessment in affected areas due to the emergency;
3. implements transport of radioactive materials and waste with the available specialized transport vehicles in case of nuclear or radiological emergency, including decontamination of facilities and equipment, contaminated with radioactive substances in case of nuclear or radiological emergency;
4. participates in decision-making and proposes to DGFSCP-MI measures, related with liquidating of the consequences and management of radioactive waste, occurred as a result of nuclear or radiological emergency.

(19) Chairman of State Agency "State Reserve and Wartime Supplies" (SASRWS) maintains a reserve of decontamination means, food and clothes for the needs of response in case of nuclear or radiological emergency in accordance with the requirements of the off-site emergency plan.

(20) Chairman of Central Cooperative Union (CCU) maintains a reserve of food products for the needs of response in case of nuclear or radiological emergency in accordance with the requirements of the off-site emergency plan.

(21) The Bulgarian National Television (BNT) and Bulgarian National Radio (BNR) plan and maintain a preparedness for emission of emergency broadcasts and instructions for behavior and actions of the population in case of nuclear or radiological emergency by request of MI.

CHAPTER III

EMERGENCY RESPONSE

Part 1
Order of emergency response

Article 22

(1) Emergency response is performing actions for limiting and reducing of the consequences of an accident on the health and safety of the personnel and population, quality of life, property and the environment, as well as it can provide the basis for resumption of normal social and economic live after liquidating the consequences of the accident.

(2) The practical aims of the emergency response are:

1. establishment of control upon the development of the emergency;
2. mitigating and/or liquidating the accident's consequences
3. prevention of deterministic effects occurrence for the personnel and population;
4. prompt and appropriate treatment of irradiated people;
5. mitigating the probability for occurrence or mitigating as far as it's possible the occurrence of stochastic health effects for the population;
6. prevention or mitigation as far as it's practically possible the occurrence of non-radiation risks for the personnel and population, such as toxic substances release in case of fire, explosions, floods, collapses, etc.
7. prevention as far as it's practically possible of the property;
8. preparation for restoration of the social and economical life.

Article 23

(1) The licensee or the relevant permit holder maintains permanent preparedness for actions in case of accidents.

(2) The licensee or the relevant permit holder maintains in readiness permanent emergency team, members of which are preliminary defined by the on-site emergency plan.

(3) Emergency teams in accordance with (2) are assured with the necessary methodologies and programs for analysis, evaluation and predictions of radiation consequences, as well as with technical, transport and communication tools and individual means for protection.

Article 24

In case of emergency the licensee or the relevant permit holder make operational the on-site emergency plan and by approved scheme notify MI via DGFSCP-MI, the Chairman of NRA, as well as the executive bodies who are relevant to liquidating the consequences of the

emergency, including protecting the casualty site and forming of operative investigation group in accordance with the emergency plans.

Article 25

(1) A person, who registers contamination with radioactive substances within the country, notifies the Chairman of NRA and the duty officer of DGFSCP-MI.

(2) In case NRA receives information about a potential threat of transboundary release, the Chairman of NRA notifies the Minister of interior via the duty officer of DGFSCP-MI and other competent MI-bodies.

Article 26

(1) For sites with threat categories I and II and in case of transboundary release, the prime-minister with an order makes operational and hence ceases the implementation of the off-site emergency plan on a national level.

(2) Until the off-site emergency plan is implemented, the Chairman of NHCC defines the implementation of urgent protective measures for the population when it is required by the emergency's development.

(3) The executive bodies and the licensee or the relevant permit holder via their emergency teams, posts for early notification and radiation monitoring and specialized laboratories, give data and information about the radiation situation and emergency's development to NHCC, DGFSCP-MI and NRA in form, order and deadlines defined with the off-site emergency plan.

(4) The Ministry of Interior works through the units which assist it's activity, processes initial assessment, check and analysis of the information, predicts the emergency's development and defines protective measures for the population in cooperation with the Minister of health, the Minister of environment and water and the Chairman of NRA.

(5) In certain cases depending on the specific protective measure by proposal of NHCC decision for its implementation is taken by the Council of Ministers.

Article 27

For sites with threat categories III, IV and V the Director of DGFSCP-MI implements the Standard Operation Procedures (SOP), included as annexes in the National Plan for Disaster Defense (NPDD) and hence ceases its implementation.

Article 28

(1) Depending on the threat category, the emergency teams implement the emergency plans under the following requirements:

1. reduction the time of presence in places and areas, contaminated with radioactive substances;
2. procession of actions on maximum distance from the radioactive source;
3. usage of protective barriers and manipulators when it is possible;
4. usage of individual means of protection.

(2) For implementation of all requirements in (1).p.1 and 2, sites and areas contaminated with radioactive substances are fenced, marked and decontaminated when it is possible.

(3) The emergency teams members check constantly their individual radiation doses and when reaching the established control limits, they immediately leave the emergency area.

(4) For all emergency team members an individual monitoring and medical observation are assured.

Article 29

(1) To prevent the distribution of radioactive contamination:

1. People, animals, transport means, materials, technical tools and other objects, contaminated with radioactive substances leave the places and areas, contaminated with radioactive substances only after decontamination;
2. out of the cases, described in p.1. leaving of places and areas, contaminated with radioactive substances is allowed when:
   a) people and objects, contaminated with radioactive substances, are isolated in a way which hinders the dispersion of radioactive substances;
   b) surface contamination of the isolating means does not exceed 20 part./cm^2.min for beta-radionuclides and low-toxic alpha-radionuclides and 2 part./cm^2.min for all other radiotoxicity groups of alpha-radionuclides;
   c) the equivalent dose rate at any point of the surface of the transport vehicle does not exceed 2 mSv/h and on the driver's seat and accompanying persons – 10 μSv/h.
3. animals, contaminated with radioactive substances, inhabit specially separated places.

(2) In case, when it's necessary to process urgent life-saving measures, injured people contaminated with radioactive substances are brought out the sites and area contaminated with radioactive substances, under constant medical control and personal monitoring.

Article 30

During an emergency all consequences as well as the efficiency of intervention are evaluated and documented.

Article 31

(1) After ending the actions of mitigating and liquidating the consequences of the emergency, by proposal of NHCC the Council of Ministers accepts if necessary a program for implementation of long-term protective measures for the people and environment.

(2) The program in accordance with (1) should ensure, in an optimal degree, limitation of the effect of harmful health, ecological, social and economic consequences of the emergency.

Part 2

Intervention

Article 32

(1) An intervention is an implementation of protective measures and all other actions for limiting, mitigating and preventing the irradiation or the possibility of irradiation and the harmful consequences for the human health, quality of life, property and environment in case of emergency, chronic irradiation or previous actions.

(2) Intervention is implemented on:

1. the source of radioactive contamination – for limiting or ceasing the direct irradiation and disposal of radioactive substances in the environment;
2. the environment – for limiting the transfer of radioactive substances on humans;
3. humans – for limiting the irradiation and effective treatment of irradiated people.

(3) The intervention is a base for recovery of normal conditions for social and economic life after liquidation of the consequences of the emergency.

(4) The intervention is defined on the base of:

1. criteria for decision-making and intervention levels;
2. predictions for the emergency's development;
3. possible results of implementation of various protective measures;
4. priority of health and social aspects before the economic considerations;
5. other economic, social and psychological factors.

(5) Intervention is implemented only when:

1. the advantage of mitigating the harmful effect of irradiation is enough to justify the caused harms of the intervention and the expenses on it, including the social price;
2. the type, range and duration of implemented protective measures are optimized so the advantage of intervention compared with caused harms to be maximal.

(6) The implementation of protective measures is not postponed by expectation of radiation monitoring results which to confirm the predictions made.

(7) The implementation of a protective measure is ceased when its further implementation is not justified, taking into account:

1. justification of decision-taking for intervention;
2. individual and collective radiation dose which will be averted by further implementation of the measure;
3. financial expenses and social consequences for the society, regarded to further implementation of the measure.

Article 33

(1) The basic types of urgent protective measures which should be immediately implemented in the first hours after arising a nuclear or radiological emergency are:

1. notification;
2. decontamination of the injured persons and additional requirements to public and personal hygiene;
3. individual and radiation monitoring;
4. limitation and control of access in places and areas contaminated with radioactive substances, including limitation of food consumption which are potentially contaminated with radioactive substances;
5. protection of the respiratory organs;

6. usage of protective clothes;
7. sheltering
8. stable iodine intake;
9. evacuation.

(2) Except the measures in (1) in case of emergency long-term protective measures are implemented which duration could be weeks, months or years. The main types of long-term protective measures are:

1. relocation (temporary or permanent);
2. limiting the consumption of foods and fodders contaminated with radioactive substances;
3. decontamination of places and areas and property contaminated with radioactive substances, as well as limitation of their usage;
4. restoration works for normalizing the conditions of life in the affected areas.

Article 34

(1) In case of contamination with radioactive substances as a result of previous or occurred emergency or activity:

1. places and areas contaminate with radioactive substances are signed and if necessary are isolated;
2. continuous individual control is assured;
3. a suitable intervention is applied taking into account the actual characteristics of the situation;
4. the usage of land and buildings located in signed places and areas pointed in p.1. is regulated;
5. an analysis is made for the possibility of implementing an intervention to lead to an increment of the radioactive effect for the population;
6. a radiation monitoring is made in a different depth under the surface.

(2) If necessary additional measures are implemented for the places and areas in which an intervention is applied, as follows:

1. control of removed contaminated with radioactive substances materials and their usage, including trading them;
2. control of access in territories, contaminated with radioactive substances.

Part 3

Intervention criteria

Article 35

(1) Intervention criteria are all factors which influence the intervention decision-taking, including intervention levels, predictions of emergency's development or results of implementing various protective measures, health, psychological, technical, geographical, economical and social factors.

(2) The criteria in accordance with (1) are considered independently of each other and as a whole for each concrete case.

(3) In implementation of criteria in accordance with (1) an appearance of deterministic effects should not be tolerated.

(4) Intervention is optimized during its implementation on the base of the existence of own and international experience, taking into account the concrete circumstances.

Article 36

(1) The intervention levels are values of the estimated dose and averted dose for a defined time, the dose rate and specific activity upon reaching them relevant protective measures are implemented.

(2) In reaching the intervention levels of estimated doses in accordance with Annex 3 urgent protective measures are implemented.

(3) In reaching the intervention levels of estimated annual equivalent doses at chronic irradiation urgent protective measures are implemented in accordance with Annex 4.

Article 37

(1) In cases of emergency followed by off-site contamination with radioactive substances, protective measures in accordance with art.33 (1) p.5-9 and (2) p.1. are implemented when reaching an intervention level in accordance with Annex 6 of Regulation No 28 (2006) for the conditions and order of medical assurance and health norms for protection of people in case of radiation accident (State Gazette No.84 of 2006).

(2) An implementation of protective measures is not necessarily if the intervention levels in accordance with Annex 6 of Regulation No 28 (2006) for the conditions and order of medical assurance and health norms for protection of people in case of radiation accident (State Gazette No.84 of 2006) are not reached. In this case the implementation of protective measures is justified and optimized depending on the concrete situation and circumstances and the results of the radiation monitoring.

(3) In case the averted effective dose is equal or bigger than the intervention levels in accordance with Annex 6 of Regulation No 28 (2006) for the conditions and order of medical assurance and health norms for protection of people in case of radiation accident (State Gazette No.84 of 2006) the decision for intervention is made taking into account the principles of justification and optimization in accordance with art.32 (5) and in accordance with the concrete situation and circumstances.

Article 38

(1) In cases of an emergency as in art.37 (1), the protective measures of art.33 (2) p.2. are implemented:

1. for foods – in accordance with the limits of radionuclides' content of foods pursuant to Regulation No 22 for defining the requirements for radioactive contamination limits for foods n case of radiation accident (State Gazette No.44 of 2002);
2. for fodders – in accordance with the action levels, defined in Annex 6.

(2) In case of an emergency described in art.37 (1) the protective measure described in art.33 (1) p.8. is implemented in accordance with Regulation No 28 for the conditions and order

of medical assurance and health norms for protection of people in case of radiation accident (State Gazette No.84 of 2006).

Article 39

(1) The intervention when finding of contamination with radioactive substances as a result of previous emergency or activity's consequences is based on the annual effective dose for the population which can be received in case no intervention is taken.

(2) An intervention is not taken when:

1. annual effective dose for the population, less or equal to 1 mSv in which the dose received from the natural radiation background of the area is not included;
2. annual effective dose for the population, less or equal to 5 mSv under special circumstances – only in case if in the next 5 consequent years the annual effective dose will not exceed 1 mSv.

(3) In case of finding contaminations with radioactive substances as a result of previous emergency or activity's consequences when the annual effective dose for the population is greater than 5 mSv, protective measures are implemented or it is advised restriction of access. The intervention is implemented after justification when annual equivalent dose for the population is 100 mSv, including the doses received from all possible radiation impacts and from the natural radiation background of the area, in exception of cases for which the Minister of health has not defined that the implementation of the intervention is not justified.

(4) In cases when the annual effective dose for the population is:

1. greater than the minimum intervention level as in (2) p.2. but less than 10 mSv (boundary intervention level), except the radiation monitoring of radioactivity content in the environment, agricultural production and dose received by the population from external and internal irradiation, are implemented measures for limiting the dose and for protection of the population, based on the principals of justification and optimization in accordance with art.32 (5) and with the concrete situation and circumstances;
2. equal or greater than 10 mSv, but less than 20 mSv including the dose received from the natural radiation background an intervention is implemented for limiting the irradiation of the population; the type and range of protective measures are defined taking into account the radiation impact upon the population by the indicator "value of collective effective dose accumulated in 70 years"; for the people settling in the limited inhabitation zone a detailed information is given by the Minister of health about the possible health risks of radiation impact;
3. greater than 20 mSv or equal to 50 mSv, settlement is not allowed and it is forbidden permanent inhabitation in the zone for children and individuals in reproductive age; radiation monitoring is performed of individuals and components of the environment and measures for radiological and medical protection of individuals are implemented;
4. greater than 50 mSv permanent inhabitation is forbidden; performance of agricultural activities and usage of the environmental resources is possible only with special acts of the Council of Ministers; a radiation monitoring and dosimetric control of the personnel is processed and protective measures for the personnel are implemented.

Article 40

(1) When with intervention is possible for the annual effective doses to exceed 50 mSv, in the intervention participate only volunteers, who are informed about consequent risks.

(2) For members of the emergency teams and for people participating in the intervention, all reasonable efforts are implemented for keeping the annual effective doses below 100 mSv.

(3) In extraordinary situations when needed a performance of life-saving actions, the limit of 100 mSv could be exceeded.

Part 4

Informing the general public

Article 41

(1) The minister of interior gives to the population in the urgent protective measures zone the following preliminary information:

1. planned protective measures for humans' health, including the measures provided in the off-site emergency plan for notification, protection and assistance of the population in case of emergency;
2. actions of the population in case of emergency;
3. basic educational information for the radiation and its impact upon human health and environment;
4. general information about possible accidents and their consequences for the population and environment.

(2) The information in (1) is given to the population without its explicit request and in a way which ensures permanent and unimpeded access to it.

(3) The information in (1) is reviewed, updated and given to the population at least once in every 3 years, as well as in cases of essential changes in its content and range.

Article 42

(1) In case of an emergency the affected population is informed immediately by NHCC and is informed periodically about the emergency, its characteristics, predictions for its development and planned protective measures and if necessary about the protective measures for health which should be implemented, including:

1. type of emergency and if it's possible its characteristics (character, duration and possible development);
2. useful advices for personal hygiene and decontamination;
3. useful advices for the implementation of protective measures for health such as:
   a) limiting the consumption of certain foods which could be contaminated with radioactive substances;
   b) stay in closed premises;
   c) organization in distribution and usage of individual means for protection and drugs;
   d) organization of possible evacuation.

4. information about cooperation to the executive bodies and emergency teams and respect of their ordinations.

(2) When it is possibility of arising an emergency, the population in the urgent protective measures zone is notified and before its arising the following information and advices are received:

1. adjusting on a particular frequency of radio- and television receivers;
2. preparation advices to medical, childcare and educational institutions and other organizations in accordance with the off-site emergency plan;
3. advices to certain professional groups.

(3) If there's enough time, the information in (2) is complemented with the information in art.41.

Section IV

Maintaining an emergency preparedness

Article 43

For maintaining an emergency preparedness the licensee or the relevant permit holder and the executive bodies should assure for their emergency teams' members that they:

1. have the necessary qualification, experience and skills for implementing the emergency plans;
2. are trained to implement the emergency plans, the relevant procedures and instructions and for work with the provided technical tools.
3. periodically pass through various forms of training to maintain and enhance their qualifications, experience and skills.

Article 44

(1) The licensee or the relevant permit holder conducts trainings periodically for its personnel for acknowledging the emergency plans.

(2) For the trainings in (1) are developed corresponding programs for training pursuant to the responsibilities of corresponding persons and units in implementing the on-site emergency plan.

Article 45

(1) For sites of threat categories I and II at least once a year is conducted a general emergency exercise and emergency training for assimilation of the on-site emergency plan.

(2) The exercise in (1) is conducted with the participation of all personnel provided in the on-site emergency plan.

(3) When conducting an exercise as in (1) for the arising of training emergency all persons on the site are informed, including the visitors, and are instructed for the action they should implement.

(4) An emergency training is conducted for checking the preparedness of the emergency team or part of it for implementation of concrete tasks of the on-site emergency plan.

(5) Emergency exercises and trainings are conducted under approved internal plans, programs and procedures.

Article 46

(1)The general emergency exercise for threat categories I and II is observed and evaluated by authorized representatives of Minister of Interior, Chairman of NRA and other persons defined by an order of Minister of Interior.

(2) In the exercise described in (1) participate largest possible number of representatives of the executive bodies who have responsibilities in accordance with the off-site emergency plan.

(3) As observers can be included representatives of international organizations of neighboring and other countries.

(4) The licensee or the relevant permit holder may draw in other observers.

(5) The persons who evaluate the exercise described in (1) could demand its repetition in a defined term.

Annex 1

Referred to art.2 (3) p.4.

Quantities of radionuclides for which an emergency planning is required.

This annex is not referred to spent fuel. For spent fuel the criteria in art.2 (3) p.1 and 2 of this Regulation are implemented. The D-value is the lowest value of D1 and D2 for the particular radionuclide.

Calculations for stationary and portable radioactive sources:

1. Calculations for all materials:

$$A/D_1 = \sum_i \frac{A_i}{D_{1,i}}$$

A_i – activity [TBq] of each separate radionuclide

$D_{1,I}$ – coefficient in Table 1

2. Calculations for dispersive (1) materials:

$$A/D_2 = \sum_i \frac{A_i}{D_{2,i}}$$

A_i – activity [TBq] of each separate radionuclide in dispersive condition

$D_{2,I}$ – coefficient in Table 1

3. Portable radioactive sources (2) are categorized only when provided that A/D ratio is greater than 1.

Table 1

Radionuclide[a]	D (TBq)	D_1 (TBq)	D_2 (TBq)
H-3	2.E+03	UL[b]	2.E+03[c]
Be-7	1.E+00	1.E+00	1.E+03
Be-10	3.E+01	3.E+02	3.E+01
C-11	6.E-02	6.E-02	4.E+02
C-14	5.E+01	2.E+05	5.E+01
N-13	6.E-02	6.E-02	UL[b]
F-18	6.E-02	6.E-02	3.E+01
Na-22	3.E-02	3.E-02	2.E+01
Na-24	2.E-02	2.E-02	2.E+01
Mg-28	2.E-02	2.E-02	1.E+01

Radionuclide[a]	D (TBq)	D_1 (TBq)	D_2 (TBq)
Al-26	3.E-02	3.E-02	5.E+00
Si-31	1.E+01	1.E+01	2.E+01
Si-32+	7.E+00	1.E+01	7.E+00
P-32	1.E+01	1.E+01	2.E+01
P-33	2.E+02	7.E+03	2.E+02
S-35	6.E+01	4.E+04	6.E+01
Cl-36	2.E+01[d]	3.E+02	2.E+01[d]
Cl-38	5.E-02	5.E-02	1.E+01
Ar-37	UL[b]	UL[b]	UL[b]
Ar-39	3.E+02	3.E+02	3.E+04
Ar-41	5.E-02	5.E-02	3.E+00 [d]
K-40	UL[b]	UL[b]	UL[b]
K-42	2.E-01	2.E-01	1.E+01
K-43	7.E-02	7.E-02	3.E+01
Ca-41	UL[b]	UL[b]	UL[b]
Ca-45	1.E+02	6.E+03	1.E+02
Ca-47+	6.E-02	6.E-02	1.E+01
Sc-44	3.E-02	3.E-02	1.E+01
Sc-46	3.E-02	3.E-02	4.E+01
Sc-47	7.E-01	7.E-01	8.E+01
Sc-48	2.E-02	2.E-02	3.E+01
Ti-44+	3.E-02	3.E-02	9.E+00
V-48	2.E-02	2.E-02	3.E+01
V-49	2.E+03	UL[b]	2.E+03
Cr-51	2.E+00	2.E+00	5.E+03
Mn-52	2.E-02	2.E-02	2.E+01
Mn-53	UL[b]	UL[b]	UL[b]
Mn-54	8.E-02	8.E-02	4.E+01
Mn-56	4.E-02	4.E-02	2.E+01
Fe-52+	2.E-02	2.E-02	9.E+00
Fe-55	8.E+02	UL[b]	8.E+02
Fe-59	6.E-02	6.E-02	1.E+01
Fe-60+	6.E-02	6.E-02	1.E+01[d]
Co-55+	3.E-02	3.E-02	2.E+02
Co-56	2.E-02	2.E-02	2.E+01
Co-57	7.E-01	7.E-01	4.E+02
Co-58	7.E-02	7.E-02	7.E+01
Co-58m+	7.E-02	7.E-02	2.E+02
Co-60	3.E-02	3.E-02	3.E+01
Ni-59	1.E+03 [d]	UL[b]	1.E+03 [d]

Radionuclide[a]	D (TBq)	D_1 (TBq)	D_2 (TBq)
Ni-63	6.E+01	UL[b]	6.E+01
Ni-65	1.E-01	1.E-01	2.E+01
Cu-64	3.E-01	3.E-01	4.E+01
Cu-67	7.E-01	7.E-01	3.E+02
Zn-65	1.E-01	1.E-01	3.E+02
Zn-69	3.E+01	8.E+01	3.E+01
Zn-69m+	2.E-01	2.E-01	2.E+01
Ga-67	5.E-01	5.E-01	4.E+02
Ga-68	7.E-02	7.E-02	1.E+01
Ga-72	3.E-02	3.E-02	2.E+01
Ge-68+	7.E-02	7.E-02	2.E+01
Ge-71	1.E+03	6.E+05	1.E+03
Ge-77+	6.E-02	6.E-02	1.E+01
As-72	4.E-02	4.E-02	9.E+01
As-73	4.E+01	4.E+01	1.E+02
As-74	9.E-02	9.E-02	3.E+01
As-76	2.E-01	2.E-01	1.E+01
As-77	8.E+00	8.E+00	4.E+01
Se-75	2.E-01	2.E-01	2.E+02
Se-79	2.E+02	UL[b]	2.E+02
Br-76	3.E-02	3.E-02	2.E+02
Br-77	2.E-01	2.E-01	7.E+02
Br-82	3.E-02	3.E-02	7.E+01
Kr-81	3.E+01	3.E+01	7.E+02
Kr-85	3.E+01	3.E+01	2.E+03
Kr-85m	5.E-01	5.E-01	3.E+01
Kr-87	9.E-02	9.E-02	4.E+00
Rb-81	1.E-01	1.E-01	2.E+03
Rb-83	1.E-01	1.E-01	5.E+01
Rb-84	7.E-02	7.E-02	2.E+01
Rb-86	7.E-01	7.E-01	2.E+01
Rb-87	UL[b]	UL[b]	UL[b]
Sr-82	6.E-02	6.E-02	5.E+00
Sr-85	1.E-01	1.E-01	7.E+01
Sr-85m+	1.E-01	1.E-01	3.E+02
Sr-87m	2.E-01	2.E-01	9.E+01
Sr-89	2.E+01	2.E+01	2.E+01
Sr-90+	1.E+00	4.E+00	1.E+00
Sr-91+	6.E-02	6.E-02	2.E+01
Sr-92+	4.E-02	4.E-02	1.E+01

Radionuclide[a]	D (TBq)	D_1 (TBq)	D_2 (TBq)
Y-87+	9.E-02	9.E-02	2.E+02
Y-88	3.E-02	3.E-02	2.E+01
Y-90	5.E+00	5.E+00	1.E+01
Y-91	8.E+00	8.E+00	2.E+01
Y-91m+	1.E-01	1.E-01	2.E+02
Y-92	2.E-01	2.E-01	1.E+01
Y-93	6.E-01	6.E-01	1.E+01
Zr-88+	2.E-02	2.E-02	3.E+01
Zr-93+	UL[b]	UL[b]	UL[b]
Zr-95+	4.E-02	4.E-02	1.E+01
Zr-97+	4.E-02	4.E-02	9.E+00
Nb-93m	3.E+02	2.E+03	3.E+02
Nb-94	4.E-02	4.E-02	3.E+01[d]
Nb-95	9.E-02	9.E-02	6.E+01
Nb-97	1.E-01	1.E-01	2.E+01
Mo-93+	3.E+02 [d]	2.E+03	3.E+02 [d]
Mo-99+	3.E-01	3.E-01	2.E+01
Tc-95m	1.E-01	1.E-01	6.E+01
Tc-96	3.E-02	3.E-02	3.E+01
Tc-96m+	3.E-02	3.E-02	2.E+02
Tc-97	UL[b]	UL[b]	UL[b]
Tc-97m	4.E+01	2.E+02	4.E+01
Tc-98	5.E-02	5.E-02	1.E+01 [d]
Tc-99	3.E+01	UL[b]	3.E+01
Tc-99m	7.E-01	7.E-01	7.E+02
Ru-97	3.E-01	3.E-01	5.E+02
Ru-103+	1.E-01	1.E-01	3.E+01
Ru-105+	8.E-02	8.E-02	2.E+01
Ru-106+	3.E-01	3.E-01	1.E+01
Rh-99	1.E-01	1.E-01	1.E+02
Rh-101	3.E-01	3.E-01	1.E+02
Rh-102	3.E-02	3.E-02	3.E+01
Rh-102m	1.E-01	1.E-01	4.E+01
Rh-103m	9.E+02	9.E+02	1.E+04
Rh-105	9.E-01	9.E-01	8.E+01
Pd-103+	9.E+01	9.E+01	1.E+02
Pd-107	UL[b]	UL[b]	UL[b]
Pd-109	2.E+01	2.E+01	2.E+01
Ag-105	1.E-01	1.E-01	1.E+02
Ag-108m	4.E-02	4.E-02	2.E+01

Radionuclide[a]	D (TBq)	D_1 (TBq)	D_2 (TBq)
Ag-110m	2.E-02	2.E-02	2.E+01
Ag-111	2.E+00	2.E+00	3.E+01
Cd-109	2.E+01	2.E+01	3.E+01
Cd-113m	4.E+01	4.E+02	4.E+01
Cd-115+	2.E-01	2.E-01	2.E+01
Cd-115m	3.E+00	3.E+00	2.E+01
In-111	2.E-01	2.E-01	1.E+02
In-113m	3.E-01	3.E-01	5.E+01
In-114m	8.E-01	8.E-01	1.E+00
In-115m	4.E-01	4.E-01	3.E+01
Sn-113+	3.E-01	3.E-01	5.E+01
Sn-117m	5.E-01	5.E-01	4.E+01
Sn-119m	7.E+01	7.E+01	1.E+02
Sn-121m+	7.E+01	1.E+02	7.E+01
Sn-123	7.E+00	7.E+00	2.E+01
Sn-125	1.E-01	1.E-01	8.E+00
Sn-126+	3.E-02	3.E-02	7.E+00 [d]
Sb-122	1.E-01	1.E-01	2.E+01
Sb-124	4.E-02	4.E-02	1.E+01
Sb-125+	2.E-01	2.E-01	3.E+01
Sb-126	2.E-02	2.E-02	2.E+01
Te-121	1.E-01	1.E-01	3.E+01
Te-121m+	1.E-01	1.E-01	8.E+00
Te-123m	6.E-01	6.E-01	9.E+00
Te-125m	1.E+01	2.E+01	1.E+01
Te-127	1.E+01	1.E+01	4.E+01
Te-127m+	3.E+00	1.E+01	3.E+00
Te-129	1.E+00	1.E+00	2.E+01
Te-129m+	1.E+00	1.E+00	2.E+00
Te-131m+	4.E-02	4.E-02	2.E-01
Te-132+	3.E-02	3.E-02	8.E-01
I-123	5.E-01	5.E-01	3.E+01
I-124	6.E-02	6.E-02	4.E-01
I-125	2.E-01	1.E+01	2.E-01
I-126	1.E-01	1.E-01	2.E-01
I-129	UL[b]	UL[b]	UL[b]
I-131	2.E-01	2.E-01	2.E-01
I-132	3.E-02	3.E-02	6.E+00
I-133	1.E-01	1.E-01	3.E-01
I-134	3.E-02	3.E-02	2.E+01

Radionuclide[a]	D (TBq)	D_1 (TBq)	D_2 (TBq)
I-135	4.E-02	4.E-02	2.E+00
Xe-122	6.E-02	6.E-02	4.E+00
Xe-123+	9.E-02	9.E-02	5.E+00
Xe-127	3.E-01	3.E-01	2.E+01
Xe-131m	1.E+01	1.E+01	7.E+02
Xe-133	3.E+00	3.E+00	2.E+02
Xe-135	3.E-01	3.E-01	2.E+01
Cs-129	3.E-01	3.E-01	1.E+03
Cs-131	2.E+01	2.E+01	2.E+03
Cs-132	1.E-01	1.E-01	1.E+02
Cs-134	4.E-02	4.E-02	3.E+01
Cs-134m+	4.E-02	4.E-02	1.E+04
Cs-135	UL[b]	UL[b]	UL[b]
Cs-136	3.E-02	3.E-02	2.E+01
Cs-137+	1.E-01	1.E-01	2.E+01
Ba-131+	2.E-01	2.E-01	1.E+02
Ba-133	2.E-01	2.E-01	7.E+01
Ba-133m	3.E-01	3.E-01	2.E+02
Ba-140+	3.E-02	3.E-02	1.E+01
La-137	2.E+01	2.E+01	5.E+02[d]
La-140	3.E-02	3.E-02	2.E+01
Ce-139	6.E-01	6.E-01	2.E+02
Ce-141	1.E+00	1.E+00	2.E+01
Ce-143+	3.E-01	3.E-01	1.E+01
Ce-144+	9.E-01	9.E-01	9.E+00
Pr-142	1.E+00	1.E+00	2.E+01
Pr-143	3.E+01	8.E+01	3.E+01
Nd-147+	6.E-01	6.E-01	4.E+01
Nd-149+	2.E-01	2.E-01	1.E+01
Pm-143	2.E-01	2.E-01	2.E+02
Pm-144	4.E-02	4.E-02	3.E+01
Pm-145	1.E+01	1.E+01	4.E+02
Pm-147	4.E+01	8.E+03	4.E+01
Pm-148m	3.E-02	3.E-02	3.E+01
Pm-149	6.E+00	6.E+00	2.E+01
Pm-151	2.E-01	2.E-01	3.E+01
Sm-145+	4.E+00	4.E+00	2.E+02
Sm-147	UL[b]	UL[b]	UL[b]
Sm-151	5.E+02	UL[b]	5.E+02
Sm-153	2.E+00	2.E+00	4.E+01

Radionuclide[a]	D (TBq)	D_1 (TBq)	D_2 (TBq)
Eu-147	2.E-01	2.E-01	1.E+02
Eu-148	3.E-02	3.E-02	3.E+01
Eu-149	2.E+00	2.E+00	5.E+02
Eu-150b	2.E+00	2.E+00	3.E+01
Eu-150a	5.E-02	5.E-02	4.E+02
Eu-152	6.E-02	6.E-02	3.E+01
Eu-152m	2.E-01	2.E-01	2.E+01
Eu-154	6.E-02	6.E-02	2.E+01
Eu-155	2.E+00	2.E+00	1.E+02
Eu-156	5.E-02	5.E-02	3.E+01
Gd-146+	3.E-02	3.E-02	8.E+00
Gd-148	4.E-01	UL[b]	4.E-01
Gd-153	1.E+00	1.E+00	8.E+01
Gd-159	2.E+00	2.E+00	3.E+01
Tb-157	1.E+02	1.E+02	1.E+03 [d]
Tb-158	9.E-02	9.E-02	5.E+01 [d]
Tb-160	6.E-02	6.E-02	3.E+01
Dy-159	6.E+00	6.E+00	5.E+02
Dy-165	3.E+00	3.E+00	2.E+01
Dy-166+	1.E+00	1.E+00	2.E+01
Ho-166	2.E+00	2.E+00	2.E+01
Ho-166m	4.E-02	4.E-02	3.E+01 [d]
Er-169	2.E+02	2.E+03	2.E+02
Er-171	2.E-01	2.E-01	2.E+01
Tm-167	6.E-01	6.E-01	2.E+02
Tm-170	2.E+01	2.E+01	2.E+01
Tm-171	3.E+02	3.E+02	4.E+02
Yb-169	3.E-01	3.E-01	3.E+01
Yb-175	2.E+00	2.E+00	1.E+02
Lu-172	4.E-02	4.E-02	6.E+01
Lu-173	9.E-01	9.E-01	2.E+02
Lu-174	8.E-01	8.E-01	1.E+02
Lu-174m+	6.E-01	6.E-01	6.E+01
Lu-177	2.E+00	2.E+00	1.E+02
Hf-172+	4.E-02	4.E-02	6.E+00
Hf-175	2.E-01	2.E-01	3.E+01
Hf-181	1.E-01	1.E-01	1.E+01
Hf-182+	5.E-02	5.E-02	UL[b]
Ta-178[a]	7.E-02	7.E-02	4.E+03
Ta-179	6.E+00	6.E+00	6.E+02

Radionuclide[a]	D (TBq)	D_1 (TBq)	D_2 (TBq)
Ta-182	6.E-02	6.E-02	3.E+01
W-178	9.E-01	9.E-01	6.E+02
W-181	5.E+00	5.E+00	2.E+03
W-185	1.E+02	7.E+02	1.E+02
W-187	1.E-01	1.E-01	3.E+01
W-188+	1.E+00	1.E+00	8.E+00
Re-184	8.E-02	8.E-02	3.E+01
Re-184m+	7.E-02	7.E-02	2.E+01
Re-186	4.E+00	4.E+00	1.E+01
Re-187	UL[b]	UL[b]	UL[b]
Re-188	1.E+00	1.E+00	3.E+01
Re-189	1.E+00	1.E+00	1.E+01
Os-185	1.E-01	1.E-01	7.E+01
Os-191	2.E+00	2.E+00	9.E+01
Os-191m+	1.E+00	1.E+00	7.E+02
Os-193	1.E+00	1.E+00	3.E+01
Os-194+	7.E-01	7.E-01	9.E+00
Ir-189	1.E+00	1.E+00	2.E+02
Ir-190	5.E-02	5.E-02	6.E+01
Ir-192	8.E-02	8.E-02	2.E+01
Ir-194	7.E-01	7.E-01	2.E+01
Pt-188+	4.E-02	4.E-02	9.E+01
Pt-191	3.E-01	3.E-01	3.E+02
Pt-193	3.E+03	1.E+05	3.E+03
Pt-193m	1.E+01	1.E+01	4.E+02
Pt-195m	2.E+00	2.E+00	3.E+02
Pt-197	4.E+00	4.E+00	5.E+01
Pt-197m+	9.E-01	9.E-01	2.E+01
Au-193	6.E-01	6.E-01	1.E+03
Au-194	7.E-02	7.E-02	4.E+02
Au-195	2.E+00	2.E+00	1.E+02
Au-198	2.E-01	2.E-01	3.E+01
Au-199	9.E-01	9.E-01	3.E+02
Hg-194+	7.E-02	7.E-02	9.E+00
Hg-195m+	2.E-01	2.E-01	1.E+01
Hg-197	2.E+00	2.E+00	3.E+01
Hg-197m+	7.E-01	7.E-01	2.E+01
Hg-203	3.E-01	3.E-01	2.E+00
Tl-200	5.E-02	5.E-02	2.E+02
Tl-201	1.E+00	1.E+00	1.E+03

Radionuclide[a]	D (TBq)	D_1 (TBq)	D_2 (TBq)
Tl-202	2.E-01	2.E-01	2.E+02
Tl-204	2.E+01	7.E+01	2.E+01
Pb-201+	9.E-02	9.E-02	8.E+02
Pb-202+	2.E-01	2.E-01	6.E+01 [d]
Pb-203	2.E-01	2.E-01	2.E+02
Pb-205	UL[b]	UL[b]	UL[b]
Pb-210+	3.E-01	4.E+01	3.E-01
Pb-212+	5.E-02	5.E-02	9.E+00
Bi-205	4.E-02	4.E-02	7.E+01
Bi-206	2.E-02	2.E-02	5.E+01
Bi-207	5.E-02	5.E-02	4.E+01
Bi-210+	8.E+00	5.E+01	8.E+00
Bi-210m	3.E-01	6.E-01	3.E-01
Bi-212+	5.E-02	5.E-02	1.E+01
Po-210	6.E-02	8.E+03	6.E-02
At-211	5.E-01	5.E-01	1.E+01
Rn-222	4.E-02	4.E-02	9.E+04 [f]
Ra-223+	1.E-01	2.E-01	1.E-01
Ra-224+	5.E-02	5.E-02	3.E-01
Ra-225+	1.E-01	3.E-01	1.E-01
Ra-226+	4.E-02	4.E-02	7.E-02
Ra-228+	3.E-02	3.E-02	4.E-02
Ac-225	9.E-02	3.E-01	9.E-02
Ac-227+	4.E-02	2.E-01	4.E-02
Ac-228	3.E-02	3.E-02	1.E+02
Th-227+	8.E-02	2.E-01	8.E-02
Th-228+	4.E-02	5.E-02	4.E-02
Th-229+	1.E-02	2.E-01	1.E-02
Th-230+	7.E-02 [d]	9.E+02	7.E-02 [d]
Th-231	1.E+01	1.E+01	3.E+02
Th-232+	UL[b]	UL[b]	UL[b]
Th-234+	2.E+00	2.E+00	2.E+00
Pa-230+	1.E-01	1.E-01	9.E-01
Pa-231+	6.E-02	8.E-01	6.E-02
Pa-233	4.E-01	4.E-01	8.E+00
U-230+	4.E-02	4.E+00	4.E-02
U-232+	6.E-02 [d]	7.E-02	6.E-02 [d]
U-233	7.E-02 [f]	7.E-02 [f]	7.E-02 [d,f]
U-234+	1.E-01 [f]	1.E-01 [f]	1.E-01 [d,f]
U-235+	8.E-05 [f]	8.E-05 [f]	8.E-05 [f]

Radionuclide[a]	D (TBq)	D_1 (TBq)	D_2 (TBq)
U-236	2.E-01 [d]	UL[b]	2.E-01[d]
U-238+	UL[b]	UL[b]	UL[b]
U natural	UL[b]	UL[b]	UL[b]
U depleted	UL[b]	UL[b]	UL[b]
U enriched 10-20%	8E-04 [f]	8E-04 [f]	8E-04 [f]
U enriched >20 %	8E-05 [f]	8E-05 [f]	8E-05 [f]
Np-235	1.E+02	1.E+02	2.E+02
Np-236[b]+	7.E-03	7.E-03 [f]	7.E-03 [f]
Np-236[a]	8.E-01	8.E-01	7.E+00
Np-237+	7.E-02	3.E-01[f]	7.E-02 [d]
Np-239	5.E-01	5.E-01	6.E+01
Pu-236	1.E-01	1.E+00	1.E-01
Pu-237	2.E+00	2.E+00	6.E+01
Pu-238	6.E-02	3.E+02 [f]	6.E-02
Pu-239	6.E-02	1.E+00 [f]	6.E-02
Pu-240	6.E-02	4.E+00 [f]	6.E-02
Pu-241+	3.E+00	2.E+03 [f]	3.E+00
Pu-242	7.E-02 [d, f]	7.E-02 [d, f]	7.E-02 [d, f]
Pu-244+	3.E-04 [d, f]	3.E-04 [f]	3.E-04 [d, f]
Am-241	6.E-02	8.E+00	6.E-02
Am-242m+	3.E-01	1.E+00 [f]	3.E-01
Am-243+	2.E-01	4.E-01	2.E-01
Am-244	9.E-02	9.E-02	9.E+01
Cm-240	3.E-01	1.E+00	3.E-01
Cm-241+	1.E-01	1.E-01	7.E+00
Cm-242	4.E-02	2.E+03	4.E-02
Cm-243	2.E-01	6.E-01	2.E-01
Cm-244	5.E-02	1.E+04 [f]	5.E-02
Cm-245	9.E-02 [f]	9.E-02 [f]	9.E-02 [f]
Cm-246	2.E-01	6.E+00 [f]	2.E-01
Cm-247	1.E-03 [f]	1.E-03 [f]	1.E-03 [f]
Cm-248	5.E-03	5.E-03	7.E-02 [d]
Bk-247	8.E-02	8.E-02 [f]	8.E-02 [f]
Bk-249	1.E+01	1.E+01	4.E+01
Cf-248+	1.E-01	1.E+02 [f]	1.E-01
Cf-249	1.E-01	2.E-01	1.E-01
Cf-250	1.E-01	4.E-01	1.E-01
Cf-251	1.E-01	7.E-01	1.E-01
Cf-252	2.E-02	2.E-02	1.E-01
Cf-253	4.E-01	1.E+01	4.E-01

Radionuclide[a]	D (TBq)	D_1 (TBq)	D_2 (TBq)
Cf-254	3.E-04	3.E-04	2.E-03
$^{239}Pu/^{9}Be$	6.E-02 [g]	1.E+00 [f,g]	6.E-02 [g]
$^{241}Am/^{9}Be$	6.E-02 [g]	1.E+00 [g]	6.E-02 [g]

Notes:

a – In growth of radioactive progeny was taken into account when calculating the D values for all the radionuclides as described in Appendix VIII. An "+" indicates the radionuclides for which the progeny were significant sources of dose for the scenarios considered.

b – "UL" - Unlimited quantity

c – The intake fraction for 3H was doubled to account for skin absorption of dispersed material. This was a conservative assumption based on ICRP Publication 71 [7] data suggesting that in atmospheric contamination by HTO, absorption through the skin contributes about 1/3 of the inhalation intake.

d – Emergencies involving these amounts of radionuclides may result in airborne concentrations exceeding the level assumed to be an immediate danger to life or health (IDLH).

e – Emergencies involving bulk amounts of these radionuclides may result in airborne concentrations exceeding the level assumed to be an immediate danger to life or health (IDLH).

f – D-value is based on consideration of the criticality limit.

g – The activity given is that of the alpha-emitting radionuclide, e.g. ^{239}Pu or ^{241}Am.

Annex 2

Referred to art.36 (2)

Intervention levels based on projected absorbed dose for emergency exposure for 48 hours period

Exposed organ or tissue	Projected absorbed dose In less than 48 hours [Gy]
Whole body (bone marrow)	1
Lungs	6
Skin	3
Thyroid gland	5
Lens of the eye	2
Gonads	3
Foetus (for pregnant)	0,1

Annex 3

Referred to art.3 (3)

Intervention levels based on annual equivalent dose for chronic exposure

Exposed organ or tissue	**Annual equivalent dose [Gy]**
Gonads	0,2
Lens of the eye	0,1
Bone marrow	0,4

Annex 4

Referred to art.38 p.2.

Intervention levels based on specific activity for ^{134}Cs and ^{137}Cs for feedstuff

Feedstuff for farm animals	**Bq/kg [1, 2]**
Pigs	1250
Poultry, lambs, calves	2500
Others	5000

Remarks:

1. The intervention levels are intended to contribute observance of the maximum permitted levels of concentration of radionuclides in feedstuff, but they do not alone guarantee such observance; the observance of the intervention level do not relive the requirement for radiation monitoring of animals products destined for human consumption.
2. The intervention levels apply to feedstuff as ready for consumption.

Supplementary provisions

§ 1.

Within the meaning of this Regulation:

1. "Emergency response team" is a preliminary selected team of qualified and trained persons for implementation of protective measures for the personnel, population and environment in case of emergency or transboundary release.
2. "Emergency plan" is a document describing the actions and measures for restriction and liquidation of the consequences of accidents.
3. "Evacuation" is intervention for temporary, promptly and in organized manner bringing out people and animals from the emergency planning zone for reducing or averting the exposure in case of accident.
4. "Deterministic effects" are harmful effects for health from ionizing radiation impact, for which there is a minimal dose causing given effect, above which the gravity of the effect is increasing with the dose's increment.

5. “Protective measure” is implementation of concrete actions aiming to prevent or mitigation of the dose for the personnel and population in case of emergency or chronic irradiation.
6. “Dangerous source" is a radioactive source, which if not controlled could lead to deterministic effects.
7. “Projected dose” is the dose of exposure, which is expected to be received if intervention is not implemented in case of emergency.
8. “Radiation monitoring” is measurement of radiation parameters in the labor place or environment for the purpose of exposure assessment or control, as well as the results interpretation.
9. “Tran boundary release” is dispersion of radioactive substances across the state boundary.
10. “Chronic exposure” is prolonged exposure received with or without interruption as a result of emergency’s consequences, previous emergency or activity, during a period which is longer than the time of recovery from radiation injury.

    “Long-term protective action planning zone” is a selected area outside of the urgent protection action planning zone where in case of significant release during the accident or Tran boundary release is possible to implement intervention.
11. “Nuclear or radiological emergency” is an extraordinary situation in extraordinary event which requires implementation of operational actions for limiting the risk or unfavorable consequences upon human health and safety, his quality of life and property, as well as upon the environment and that risk is created by the chain nuclear reaction of fission or radioactive decay of fission products and radiation exposure. That also includes situations which require implementation of operational actions for limitation the impacts in realized danger.

§ 2.

With this regulation are established the requirements of Council Directive 89/618/Euratom of 27 November 1989 on informing the general public about health protection measures to be applied and steps to be taken in the event of a radiological emergency (OJ, L 357, 7 December 1989).

FINAL PROVISIONS

§ 3.

(1)The Chairman of NRA and the Minister of Interior in accordance with their competencies give instructions for implementation of this Regulation and issue manuals, methodologies and other documents on implementation of the Regulation.

(2) The documents described in (1) are published on the internet websites of NRA and MI.

§ 4.

This Regulation is issued on the basis of art.23 of ASUNE.