

Regulation on Nuclear and Radiological Emergency Preparedness

(Unofficial Translation)

Part One

Purpose, Scope, Legal Basis and Definitions

Purpose

Article 1 – This regulation describes the responsibilities of relevant ministry, institutions and affiliates and governorships relating to accident or dangerous situation before and after any nuclear and radiological accident or danger, those might arise domestic or abroad in peace time and arranges the health and safety protection activities of public and environment.

Scope

Article 2 – This regulation includes the cooperation of relevant ministry, institution and its affiliates and governorships without changing their existing authorities and responsibilities in an accident or dangerous situation in which various organizations' contributions might be needed during a possible nuclear and radiological accident or dangerous situation in the country, territorial waters and economic zone, furthermore in territories of adjacent country in peace time.

Legal Basis

Article 3 – This Regulation is prepared depending on the article 4 of the Law on Turkish Atomic Energy Institution with no. 2690 and article 4 of Radiation Safety Statute put into force with the Cabinet Decision dd. 24.07.1985 and no. 85/9727.

Definitions and Abbreviations

Article 4 – The meanings of the expressions in this Regulation are:

- a) Prime Ministry Crisis Management Center: The center which is under the responsibility of the Prime Ministry in order to end crisis and solve the issues relevant with the crisis.
- b) Contamination: Radioactive contamination that exposes person to radiation by inspiratio of radioactive material or taking it into digestive system directly or indirectly.
- c) Decontamination: Cleaning procedures performed in order to eliminate radioactive contamination
- d) IAEA: International Atomic Energy Agency
- e) Iodine tablet: Non radioactive iodine component that is going to be taken in order to prevent accumulation of radioactive iodine in thyroid in case of a danger.
- f) Crisis: Crisis defines the conditions, in the territory of the country and territorial sea, after a nuclear or radiological accident or a dangerous condition during which human beings and environment exposed or may be exposed to predetermined radiation intervention levels and needs a multilateral coordination and organisation.

g) Intervention level: Minimum dose limit that is accepted to commence the protective measures to be taken in nuclear and radiological dangerous situations.

h) Nuclear and radiological accident or dangerous situation: Exposing to radiation levels higher than those determined by the radiation protection standards with or without radioactive contamination having the probability of harming public health inside or outside of the territory which may occur; in a nuclear power plant, nuclear fuel cycle, radioactive waste management; transportation and storage of the radioactive materials, nuclear fuels and radioactive wastes in radiation facilities; during the activities related with the radiation sources for medical, industrial and research purposes, such as production, project designing, construction, installation, maintenance, repair, export, import, transport, distribution, selling, storage, handling, handing over, commissioning, management, decommissioning, dismantling, deporting; during the visit of nuclear powered ships; unwanted events that may occur in satellites or aerospace devices containing radioactive material and releasing or having possibility of releasing radioactive materials.

i) Radiation dose: Radiation quantity that is absorbed by a certain medium and energy equivalent in response to this.

i) RESA: Radiation Early Warning System Network, constitute of stations monitoring radiation dose rate in the air continuously in various places in Türkiye,

l) Evacuation: Emptying the region where there is possibility to reach up to the foreseen intervention level and transferring people to another places.

m) Region: Area where the protective measures must be taken urgently in a possible nuclear and radiological accident or dangerous situation.

Part Two

Determination of Dangerous Situation

Determination of Situation

Article 5 – TAEK performs technical inspection and evaluations, following a warning for a nuclear and radiological accident or danger, taken from RESA via other sources like mutual or multilateral agreements; informs the Prime Ministry Crisis Management Center on evaluation results and possible effects that the country might exposed to.

If dangerous situation doesn't creates a crisis condition Turkish Atomic Energy Institution undertakes the management and provides cooperation between relevant ministry, institution and its affiliates and governorships.

Part Three

Duties and Responsibilities

Duties and responsibilities of relevant ministry, institution and its affiliates and governorships

Article 6 - Duties and responsibilities of relevant ministry, institution and its affiliates and governorships are given below:

a) Ministry of Internal Affairs:

- 1) Keeps adequate number of trained personnel available, in order to announce measures in time and correctly to public.
- 2) Constitutes teams with necessary equipments for decontamination and monitoring and trains these teams in collaboration with TAEK.
- 3) Sets up warning and alarm system to announce dangerous news to public and keeps it active.
- 4) Provides opportunity to use transport vehicles including the helicopters of Police Headquarters.
- 5) Makes preparations for evacuation probability.
- 6) Determines the area that the evacuated public shall be settled temporarily or long term in cooperation with TAEK and provide necessary preparations to be made.
- 7) Provides coordination for the management of regional plan.
- 8) Takes necessary precautions in order to provide public security in the region.
- 9) Helps monitoring and transferring the equipments to region in cooperation with TAEK.
- 10) Takes preventive measures against refugee/migrant influx to our country if the danger starts in a neighboring country.

b) Ministry of Health:

- 1) Provides training of the personnel, who will be appointed in case of danger, in cooperation with TAEK.
- 2) Keeps and evaluates statistical data of miscarriage, abnormal births and cancers annually on the basis of provinces through the country.
- 3) Prepares iodine tablets and other medicines by taking the regional population into consideration, stores them in appropriate conditions and places, renews them if needed and takes necessary measures for assuring adequate vehicle and members in cooperation with the Ministry of Internal Affairs in order to provide distribution at the right time.
- 4) Equips the health facilities at the region adequately, in case of need establishes treatment centers for this goal and keeps trained health personnel available.
- 5) Provides appropriate medical intervention and treatment to the persons who exposed to overdose and radioactive contamination separately or together.
- 6) Provides training and rescue services in cooperation with Ministry of Internal Affairs.
- 7) Monitors long term health problems that may arise as a result of nuclear and radiological accident or dangerous situation and performs necessary evaluations.

c) Ministry of Agriculture and Village Affairs

- 1) Constitutes environmental sample collection teams for evaluation of TAEK and provides training of those teams in cooperation with TAEK.

- 2) Determines feeding habits of the people living in the region.
- 3) Determines the food quantity of the region in case of contamination and the places where they will be procured.
- 4) Determines the quantity of animal and vegetable products and aqua cultural products produced in the region.
- 5) Makes planning on the animal feed procurement.
- 6) Takes necessary measures for the animals in the region.
- 7) Takes necessary measures in cooperation with Ministry of Internal Affairs to control and prevent the food consignment that can be made to other areas from the region which is exposed to contamination.

d) Ministry of Transportation:

- 1) Takes measures relevant with the procurement of land transport vehicles in adequate number.
- 2) If there is railroad in the region, takes necessary measures to keep the line working continuously and to add additional trips.
- 3) If there is an airline connection to the region, takes necessary measures to add additional trips if needed.
- 4) Takes measures to provide uninterrupted communication with the region.

e) Ministry of Public Works

- 1) Keeps the roads those are under General Directorate of Highways responsibility open and well cared, provides secure use of them.
- 2) In case of evacuation executes temporary and long term residence activities.
- 3) Keeps the personnel and equipment available that may be needed in case of disasters such as fire, flood those can occur during danger period.

f) Ministry of Energy and Natural Sources:

- 1) Determines the waters under the surface in the region, makes the necessary arrangements in order to provide use of underwater sources in case the open water sources can not be used due contamination.
- 2) Takes measures to provide electricity need of the region uninterruptedly.

g) Ministry of Environment and Forest:

- 1) Constitutes environmental sample collection teams for evaluation of TAEK and provides training of these teams in cooperation with TAEK.
- 2) Observes possible effects on the environment in the region, first of all on plants and animal kinds, and makes necessary evaluations.

h) Governorships

- 1) Provides consignment of the teams responsible from measurement, announcement and decontamination of the contaminated areas to their task areas in cooperation with TAEK.
- 2) Takes measures to prevent panic and civic turmoil and if necessary takes curfew decision.
- 3) In case of need provides public and animals in the region stay in indoors.
- 4) Take measures to prevent consumption of contaminated foods and drinks by the public of the region.
- 5) Takes measures to meet clean food and drink needs of the public in the region.
- 6) Determines the storing places of the supplies those that will be distributed, and protects them.
- 7) Provides control for the entrance and exit to the region.
- 8) Provides distribution of iodine tablets in cooperation with the Ministry of Health.
- 9) Prepares for quarantine and isolation in case of need.
- 10) Prepares evacuation plan and takes measures for secure evacuation.
- 11) Determines water tanks in the region, protects and in case of need serves for use.
- 12) Takes necessary measures to prevent use of contaminated water sources, pastures and farming fields.

ı) Turkish Atomic Energy Authority

- 1) Cooperates the training of the personnel of ministry, institutions and their affiliates that will take part in case of dangerous situation.
- 2) Determines the intervention levels for nuclear and radiological accident and dangerous situations.
- 4) Prepares and performs planned exercises directed towards dangerous situation in corporation with relevant ministries, institutions and their affiliates and governorships.
- 5) Performs radiological monitoring and evaluates the data.
- 6) Sends measurement equipment and devices to the region.
- 7) Makes dose evaluations and determines measures to be taken.
- 8) Informs the response teams about the measures to be taken in a nuclear or radiological accident or dangerous situation.
- 9) Performs the radioactivity analysis or have the analysis done.

ı) General Directorate of State Meteorology Affairs

Sends information to TAEK such as wind speed, wind direction, rainfall, stability of the atmosphere and mixture height.

j) General Presidency of Red Crescent

1) Provides raw materials of iodine tablets at first in cooperation with the Ministry of Health in order to use in case of danger, stores and keeps in use at any moment.

2) Meets the sheltering and food requirements at the temporary residence areas in cooperation with the Ministry of Internal Affairs.

Inspection and Supervision

Article 7 – Duties charged to relevant ministries, institutions and their affiliates with the article 6 of this Regulation are fulfilled under inspection and supervision of local civil administrators in provinces.

International Communication

Article 8 – Ministry of Foreign Affairs provides the entire foreign contacts, relevant with the probable developments as a result of the technical evaluation of the TAEK, in case of a nuclear and radiological accident or dangerous situation whose effects can be dispersed over the borders, and informs TAEK.

TAEK provides the first communication with IAEA in the scope of Early Notification and Assistance convention and the other International conventions and informs Ministry of Foreign Affairs.

Standardization

Article 9 – Measurements and analyses are performed in accordance with the sampling, measuring and analyzing methods of TAEK.

Monitoring devices that will be used in a dangerous situation shall be calibrated in TAEK Çekmece Nuclear Research and Training Center by the relevant organizations and shall be kept available. Inventory about these devices and protective equipments are updated at every January and informed to TAEK.

Informing the public

Article 10 – TAEK performs every kind of informing activities, containing at least the information given in Annex -1, by published means like posters, brochures, magazines, books, etc. and mass media tools such as radio, television in order to inform public on measures to be taken in case of dangerous situations, on effects of radiation on public health and similar issues. TAEK cooperates with Ministry of Internal Affairs, Ministry of Health, Ministry of National Education, Ministry of Agriculture and Village Affairs, Ministry of Environment and other ministries, institutions and their affiliates during these activities.

In case of realization of a nuclear or radiological accident or dangerous condition, people that are foreseen or probable to be affected, informed with at least the information given in Annex 2.

Article 11 – Foodstuff and feeding stuff that are not in correlation with the maximum levels given in Annex 3, after the radioactivity analysis after any nuclear or radiological accident or danger condition cannot be released to domestic market.

Part Four

Final Provisions

Enforcement

Article 11 - This Regulation shall be enforced as of issue date.

Execution

Article 12 - The provisions of this Regulation shall be executed by the Prime Minister.

ANNEX -1

THE PREINFORMATION FOR THE PUBLIC THAT SHOULD BE GIVEN IN A PROBABLE NUCLEAR OR RADIOLOGICAL ACCIDENT OR DANGER SITUATION

1. Basic information about radiation, radioactivity and their effects on human health and environment.
2. The types of various nuclear and radiological accidents and dangers and results of these from public and environmental point of view.
3. The emergency condition measures for the warning, prevention and help to the public during a nuclear and radiological accidents and danger situation.
4. The necessary information about the measures that should be taken by the public during a nuclear and radiological accidents and danger.

ANNEX – 2

INFORMATION THAT SHOULD BE GIVEN TO PUBLIC DURING A NUCLEAR OR RADIOLOGICAL ACCIDENT OR DANGER

1. Based on predetermined response plans, the affected people should be informed with the followings in a rapidly and continuously manner during nuclear and radiological accidents and danger;
 - a) About the type and properties (source, extent and probably development) of the emergency situation.
 - b) Depending on the type of the emergency situation;
 - i) Limitations about the consumptions of the food stuffs that may be contaminated, basic rules about the hygiene and decontamination, advices about staying indoors, information about the distribution and use of the protective materials and the regulations about the evacuations.
 - ii) The information, if necessary, about the protection of the some special public groups,
 - c) Information about the directions and wishes of the competent authorities and special rules.

2. If there is a prealarm step before the nuclear or radiological accident or danger condition, public that may be affected should be informed for;
 - a) Adjustment of radios and televisions,
 - b) Preparatory advices especially for institutions that have common responsibilities,
 - c) Advices especially for the affected working groups.
3. These information and advices, as far as the time allows, would be supported with the information about the radioactivity, and basic realities about its effects on human health and environment.

ANNEX – 4

Maximum Levels^a That are Permitted for Foodstuffs (Bq/kg)

	Baby foods ^b	Dairy Products ^c	General Consumption Foods ^d	Beverages ^e
Isotopes of strontium, especially Sr-90	75	125	750	125
Isotopes of iodine, especially I-131	150	500	2000	500
Alpha emitting isotopes of the plutonium and transplutonium, especially Pu-239, Am-241	1	20	80	20
Other isotopes with a half life of more than 10 days, especially Cs-134, Cs-137 ^f	400	1000	1250	1000

Maximum Levels That are Permitted for Feedind Stuffs^{g,h} (Cs-134 and Cs-137) (Bq/kg)

Pigswill	1250
Feeding stuff for fowl, lamb, calf	2500
Other	5000

a: These limits are applied for the concentrated and dehydrated foods after prepered for the consumption.

b: These are food stuffs that are marketed for aim of feeding of babies 4 – 6 months of age.

c: These are products customs union tariff 0401 and 0402 CN (except 0402 29 11).

d: These food stuffs are consumed in large amounts. For the food stuffs that are consumed in small amount ten times the values given in this column can be used.

e: This value is applied also for drinking water.

f. Carbon-14, tritium and potassium-40 are not included in this group.

g: These values are to contribute maximum permissible levels for the foodstuffs for human consumption and does not remove or decrease the need for monitoring the animal food for human consumption.

h: These values are for ready to use feeding stuffs.