

REGULATION OF THE COUNCIL OF MINISTERS

of 17 December 2002

on stations for the early detection of radioactive contamination and units which measure radioactive contamination

(Journal of Laws no. 239, item 2030)

Pursuant to the provisions of art. 75 of the Atomic Energy Law of 29 November 2000 (Journal of Laws of 2001, no. 3, item 18, no. 100, item 1085, no. 154, item 1800, of 2002, no. 74, item 676 and no. 135, item 1145), the following is ordained:

§ 1. This regulation defines:

- 1) list of stations for early detection of radioactive contamination, hereinafter referred to as "stations";
- 2) list of units conducting measurements of radioactive contamination hereinafter referred to as "units";
- 3) detailed tasks of stations and units;
- 4) manner of performing the tasks of stations and units.

§ 2. The list of stations, divided into basic stations and auxiliary stations, is presented in Annex no. 1 hereto.

§ 3. The list of units divided into basic units and specialized units, is presented in Annex no. 2 hereto.

§ 4. Basic stations have the following tasks:

- 1) measurement of radiation dose rates with the involvement of gamma-ray spectrometry, in order to detect radiation increase of 25 nSv/h in excess of the average value recorded in the course of 24 hours preceding the measurement, resulting from the presence of man-made gamma radioisotopes in the environment;
- 2) measurement of the content of man-made radioisotopes in aerosol samples with the involvement of gamma-ray spectrometry in stations equipped with devices for the collection of airborne aerosols, to determine:
 - a) after 1 hour of collection of airborne aerosols – Cs-137 isotope with concentration higher than 2 Bq/m³, and I-131 isotope with concentration higher than 1 Bq/m³;
 - b) after 1 week of collection of airborne aerosols – gamma-ray isotopes, in particular Cs-137 and I-131 with concentration higher than 5 mBq/m³;
- 3) measurement – in stations equipped with devices for the collection of airborne aerosols with alpha and beta radioisotopes – after 1 hour of aerosol collection, total content of man-made alpha and beta radioisotopes with concentration higher than 1 Bq/m³;
- 4) systematic inspection of measurement devices applied for the performance of measurements as per points 1-3 above;
- 5) registration of measurement results as per points 1-3 above;
- 6) forwarding measurement results, as per points 1-3 above, to the Radiation Emergency Centre of the National Atomic Energy Agency, whose frequency is defined:
 - a) for standard conditions – by measurement programmes developed by organisations which operate the stations, as approved by the President of the National Atomic Energy Agency, hereinafter referred to as the "Agency President",
 - b) for radiological emergencies – by the Agency President, subject to the course of the incident.

§ 5. Auxiliary stations have the following tasks:

- 1) measurement of gamma radiation dose rates every 1 hour and definition of the mean gamma radiation dose rate in the course of 24 hours;
- 2) systematic inspection of measurement devices applied for the performance of measurements as per point 1 above;
- 3) registration of measurement results as per point 1 above;
- 4) forwarding measurement results, as per point 1 above, to the Radiation Emergency Centre of the National Atomic Energy Agency, whose frequency is defined:
 - a) for standard conditions – by measurement programmes developed by organisations which operate the stations, as approved by the Agency President,
 - b) for radiological emergencies – by the Agency President, subject to the course of the incident.

§ 6. 1. The task as per §4 point 1 above shall involve continuous measurement of the dose rate at the height of 1 m above ground surface with the application of the results of simultaneous spectrometry measurement of gamma radiation conducted in air at the same height, in view of temperature and precipitation intensity.

2. The task as per §4 point 2 shall involve the continuous collection of airborne aerosols in the filter which is applied to filter atmospheric air, drawn in at the height of 1 m to 1.5 m above ground level, continuous spectrometer measurement of gamma radiation emitted by aerosols collected in the filter, and laboratory spectrometer measurement of gamma radiation emitted by aerosols collected in the filter after weekly sample collection.

3. The task as per §4 point 3 above shall involve the continuous collection of airborne aerosols in the filter which is applied to filter atmospheric air, drawn in at the height of 1 m to 1.5 m above ground level, continuous measurement of alpha and beta radiation emitted by airborne aerosols collected in 1 hour.

4. The task as per §5 point 1 above shall involve the continuous measurement of the dose rate at the height of 1 m above ground level.

§ 7. Basic units shall have the following tasks:

- 1) measurement of radioisotope content in samples of:
 - a) surface water, in particular from rivers: Vistula, Odra, Bug, Narew and Warta, in the vicinity of main water intakes – Cs-137 in excess of 1 Bq/l, Sr-90 in excess of 0.6 Bq/l,
 - b) potable water from municipal water supply systems in Polish voivodship capital cities and cities with population higher than 200 000 – Cs-137 in excess of 0.1 Bq/l and Sr-90 in excess of 0.06 Bq/l,
 - c) milk and other foodstuffs which constitute the basic components of an average daily ration - Cs-137 in excess of 0.5 Bq/l and Sr-90 in excess of 0.2 Bq/l,
 - d) raw feedingstuffs – Cs-134 and Cs-137 in excess of 250 Bq/kg;
- 2) registration of samples;
- 3) registration of measurement results;
- 4) participation in comparative measurements held by the Agency President at least once a year.

§ 8. The samples, as per §7 point 1 above, shall be taken:

- 1) in standard conditions – in locations indicated by the Chief Sanitary Inspector acting in agreement with the Chief Environmental Protection Inspector and the Agency President, with the following minimum frequency:
 - a) for milk, foodstuffs and potable water – every quarter,
 - b) for river water – twice a year, in the spring and autumn;

2) in radiological emergencies – in locations and with the frequency indicated by the Agency President in view of the course of the radiological emergency.

§ 9. 1. Specialized units have the following tasks:

1) measurement of radioisotope content in samples of:

a) milk, potable water and foodstuffs – man-made alpha radioisotopes, in particular Pu-239 and Am-241, in excess of 1 Bq/l or

b) surface water – Cs-137 in excess of 0.1 Bq/l and Sr-90 in excess of 0.06 Bq/l, or

c) potable water:

- Cs-137 in excess of 0.02 Bq/l and Sr-90 in excess of 0.01 Bq/l or

- H-3 in excess of 10 Bq/l, or

- natural alpha radioisotopes if total activity of alpha radioisotopes exceeds 0.1 Bq/l, and natural beta radioisotopes if total activity of beta radioisotopes exceeds 1 Bq/l, or

d) milk and foodstuffs – man-made gamma radioisotopes, in particular Cs-137 in excess of 0.1 Bq/kg, and man-made beta radioisotopes, in particular Sr-90 in excess of 0.06 Bq/kg, or

e) environmental materials, including:

- soil – Cs-137 in excess of kBq/m², or

- bottom deposits – Cs-137 in excess of 1 Bq/kg and Pu-238, Pu-239 and Pu-240 isotopes in excess of 0.1 Bq/kg, or

- total precipitation – Cs-137 in excess of 0.05 Bq/m² x month, and Sr-90 in excess of 0.05 Bq/m² x 3 months;

2) registration of samples;

3) registration of measurement results;

4) participation in comparative measurements held by the Agency President at least once every 2 years;

5) development of measurement technique designs for qualitative and quantitative identification of radioisotopes in environmental materials and foodstuffs, and submission thereof for the approval of the Agency President.

2. Location and frequency of sampling, as per section 1 point 1 above, and the scope of measurement are defined by:

1) for standard conditions – measurement programmes developed by organisations operating such units, approved by the Agency President;

2) for radiological emergencies – Agency President, subject to the course of the event.

§ 10. 1. The task, as per §7 point 2 and §9 section 1 point 2, shall involve the registration of samples, including:

1) determination of sample type and manner of sample preparation for measurement;

2) date and hour of commencement and completion of sampling;

3) information on the sampling location, including the name of town and detailed location in town.

2. The task, as per §4 point 5, §5 point 3, §7 point 3 and §9 section 1 point 3, shall involve the registration of measurements in the registration log, comprising:

1) name, address and code of measuring station or unit, in relation to stations – also the geographical co-ordinates of its location;

2) in relation to stations performing tasks as per §4 points 2 and 3, and in relation to units – name and symbol of isotope whose content is measured;

- 3) definition of measurement method;
- 4) definition of the type of measurement device and type of measurement detector;
- 5) measurement results with indication of measurement error.

§ 11. The tasks, as per §7 point 1 and §9 section 1 point 1, shall involve the concentration of samples, chemical separation of isotopes and measurement of radiation emitted by products obtained from the samples.

§ 12. The results of measurement of isotope content in samples, as per §7 point 1 and §9 section 1 point 1, shall be forwarded by the measuring units to the Agency Chairman, with the following frequency:

- 1) for standard conditions – defined by measurement programmes developed by organisations operating such facilities, approved by the Agency President;
- 2) for radiological emergencies – defined by the Agency President, subject to the course of the event.

§ 13. In relation to basic stations operating in organisations reporting to the minister competent for environmental protection, as per Annex no. 1 hereto, the provisions of §4 point 1 shall become effective on 1 January 2006.

§ 14. This regulation becomes effective on 1 January 2003.

President of the Council of Ministers: *L. Miller*

Annexes to the Regulation of the Council of Ministers of 17 December 2002 (item 2030)

Annex no. 1

LIST OF STATIONS FOR EARLY DETECTION OF RADIOACTIVE CONTAMINATION, WITH A DIVISION INTO BASIC STATIONS AND AUXILIARY STATIONS

1. Basic stations:

a) operating at the National Atomic Energy Agency and in organisations reporting to the minister competent for the economy, situated in the following cities:

- 1) Białystok – podlaskie voivodship
- 2) Gdynia – pomorskie voivodship
- 3) Koszalin – zachodniopomorskie voivodship
- 4) Kraków – małopolskie voivodship
- 5) Lublin – lubelskie voivodship
- 6) Łódź – łódzkie voivodship

- 7) Olsztyn - warmińsko-mazurskie voivodship
- 8) Sanok – podkarpackie voivodship
- 9) Szczecin – zachodniopomorskie voivodship
- 10) Toruń - kujawsko-pomorskie voivodship
- 11) Warszawa – mazowieckie voivodship
- 12) Wrocław - dolnośląskie voivodship
- 13) Zielona Góra - lubuskie voivodship

b) operating in organisations reporting to the minister competent for environmental protection, situated in the following cities:

- 1) Gdynia - pomorskie voivodship
- 2) Gorzów Wielkopolski - lubuskie voivodship
- 3) Legnica - dolnośląskie voivodship
- 4) Lesko - podkarpackie voivodship
- 5) Mikołajki - warmińsko-mazurskie voivodship
- 6) Świnoujście - zachodniopomorskie voivodship
- 7) Warszawa - mazowieckie voivodship
- 8) Włodawa - lubelskie voivodship
- 9) Zakopane - małopolskie voivodship

2. Auxiliary stations operating in organisations reporting to the Minister of National Defence, situated in the following cities:

- 1) Bartoszyce - warmińsko-mazurskie voivodship
- 2) Bydgoszcz - kujawsko-pomorskie voivodship
- 3) Gdynia - pomorskie voivodship
- 4) Kraków - małopolskie voivodship
- 5) Lublin - lubelskie voivodship
- 6) Rzeszów - podkarpackie voivodship
- 7) Śrem - wielkopolskie voivodship
- 8) Świnoujście - zachodniopomorskie voivodship
- 9) Szczecin - zachodniopomorskie voivodship
- 10) Ustka - pomorskie voivodship
- 11) Warszawa - mazowieckie voivodship
- 12) Wrocław - dolnośląskie voivodship
- 13) Żagań - lubuskie voivodship

Annex no. 2.

LIST OF UNITS MEASURING RADIOACTIVE CONTAMINATION, WITH A DIVISION INTO BASIC UNITS AND SPECIALIZED UNITS

1. Basic units – sanitary and epidemiological stations (SES), are situated in the following cities:

- 1) Białystok - podlaskie voivodship
- 2) Łomża - podlaskie voivodship

- 3) Bydgoszcz - kujawsko-pomorskie voivodship
- 4) Toruń- kujawsko-pomorskie voivodship
- 5) Włocławek - kujawsko-pomorskie voivodship
- 6) Gdańsk - pomorskie voivodship
- 7) Słupsk - pomorskie voivodship
- 8) Gorzów – Wielkopolski - lubuskie voivodship
- 9) Zielona Góra - lubuskie voivodship
- 10) Katowice - śląskie voivodship
- 11) Bielsko-Biała - śląskie voivodship
- 12) Częstochowa - śląskie voivodship
- 13) Kielce - świętokrzyskie voivodship
- 14) Kraków - małopolskie voivodship
- 15) Tarnów - małopolskie voivodship
- 16) Nowy Sącz - małopolskie voivodship
- 17) Lublin - lubelskie voivodship
- 18) Zamość - lubelskie voivodship
- 19) Chełm - lubelskie voivodship
- 20) Biała Podlaska - lubelskie voivodship
- 21) Łódź - łódzkie voivodship
- 22) Piotrków Trybunalski - łódzkie voivodship
- 23) Skierniewice - łódzkie voivodship
- 24) Zduńska Wola - łódzkie voivodship
- 25) Olsztyn - warmińsko-mazurskie voivodship
- 26) Elbląg – warmińsko-mazurskie voivodship
- 27) Opole - opolskie voivodship
- 28) Poznań - wielkopolskie voivodship
- 29) Kalisz - wielkopolskie voivodship
- 30) Leszno - wielkopolskie voivodship
- 31) Piła - wielkopolskie voivodship
- 32) Konin - wielkopolskie voivodship
- 33) Rzeszów - podkarpackie voivodship
- 34) Przemyśl - podkarpackie voivodship
- 35) Sanok - podkarpackie voivodship
- 36) Tarnobrzeg - podkarpackie voivodship
- 37) Szczecin - zachodniopomorskie voivodship
- 38) Koszalin - zachodniopomorskie voivodship
- 39) Warszawa - mazowieckie voivodship
- 40) Ciechanów - mazowieckie voivodship
- 41) Ostrów Mazowiecka - mazowieckie voivodship
- 42) Płock - mazowieckie voivodship
- 43) Radom - mazowieckie voivodship
- 44) Siedlce - mazowieckie voivodship
- 45) Wrocław - dolnośląskie voivodship

- 46) Jelenia Góra - dolnośląskie voivodship
- 47) Legnica - dolnośląskie voivodship
- 48) Wałbrzych - dolnośląskie voivodship

2. Specialized units:

- 1) Central Radiation Protection Laboratory in Warszawa
- 2) H. Niewodniczański Nuclear Physics Institute in Kraków, Radioactive Contamination Laboratory
- 3) National Hygiene Institute in Warszawa, Institute for Radiation and Radiobiology Protection
- 4) Academy of Mining and Metallurgy in Kraków, Department of Nuclear Physics and Engineering
- 5) Main Institute of Mining in Katowice, Radiometry Laboratory,
- 6) A. Sołtan Institute of Atomic Energy in Otwock-Świerk, Radiation Protection Service
- 7) Institute of Meteorology and Water Economy in Warszawa
- 8) Military Institute for Hygiene and Epidemiology in Warszawa, Institute for Radiation Protection and Radiology
- 9) Military Institute of Chemistry and Radiometry in Warszawa, Dosimetry and Radiometric Equipment Laboratory