

Unofficial translation

REGULATION OF THE COUNCIL OF MINISTERS

of 17 December 2002

**on the stations for early detection of radioactive contamination and on the units that
conduct measurements of radioactive contamination
(O.J. No 239 Item 2030)**

Under Article 75 of the Act of Parliament of 29 November 2000 - Atomic Law (Polish O.J. of 2001 No 3 Item 18, No 100 Item 1085 and No 154 Item 1800, and of 2002 No 74 Item 676 and No 135 Item 1145) the following regulation is adopted:

§1. Regulation shall establish the following:

- 1) List of the stations for early detection of radioactive contamination, thereafter referred to as “the stations”,
- 2) List of the units that conduct the measurements of radioactive contamination, thereafter referred to as “the units”,
- 3) Detailed tasks of the stations and units,
- 4) Methods for performing the tasks by the stations and units.

§2. List of the stations, with division into basic and subsidiary stations, is given in Annex 1 to the Regulation.

§3. List of the units, with division into basic and specialized units, is given in Annex 2 to the Regulation.

§4. Tasks of basic stations include:

- 1) Conduct of measurements, using gamma spectroscopy, of the gamma dose rate, to detect its rise by 25 nanosievert per hour (nSv/h) exceeding the average over the last 24 hours preceding the measurement, and caused by the presence of artificial gamma-radioactive isotopes in vicinity;
- 2) Conduct of measurements, using gamma spectroscopy - by the stations equipped with devices for collecting atmospheric aerosols - of the content of artificial isotopes in such aerosol samples, to detect:
 - a) after 1 hour of atmospheric aerosol collection – cesium isotope Cs-137 with concentration over 2 becquerel per cubic meter (Bq/m³) and iodine isotope I-131 with concentration over 1 Bq/m³,

- b) after 1 week of atmospheric aerosol collection – gamma-radioactive isotopes, in particular cesium Cs-137 and iodine I-131, with concentration over 5 microbecquerel per cubic meter ($\mu\text{Bq}/\text{m}^3$);
- 3) Conduct of measurements - by the stations equipped with devices for collecting atmospheric aerosols with alpha- and beta-radioactive isotopes – after 1 hour of aerosol collection, of the total content of artificial alpha- and beta-radioactive isotopes with concentration over 1 Bq/m^3 ,
- 4) Systematic verification of correct functioning of measuring equipment used for measurements referred to in paragraphs 1-3;
- 5) Maintaining the records of the results of measurements referred to in paragraphs 1-3;
- 6) Transmission to the Center for Radiation Emergencies at the National Atomic Energy Agency of the results of measurements referred to in paragraphs 1-3, with frequency established:
 - a) for normal conditions – in measurement programs developed by the entities, in which these stations are operated, and approved by the President of the National Atomic Energy Agency, thereafter referred to as “the Agency’s President”,
 - b) For radiation emergency situation – by the Agency’s President, depending on the emergency scenario.

§4. Tasks of subsidiary stations include:

- 1) Conduct of measurements of gamma dose rate, every hour, and determination of the average gamma dose rate for a 24-hour period;
- 2) Systematic verification of correct functioning of measuring equipment used for measurements referred to in paragraph 1;
- 3) Maintaining the records of the results of measurements referred to in paragraph 1;
- 4) Transmission to the Center for Radiation Emergencies at the National Atomic Energy Agency of the results of measurements referred to in paragraph 1, with frequency established:
 - a) For normal conditions – in measurement programs developed by the entities, in which these stations are operated, and approved by the Agency’s President,
 - b) For radiation emergency situation – by the Agency’s President, depending on the emergency scenario.

§6.1. Performance of the task referred to in §4(1) consist in the conduct of continuous dose rate measurement at the height of 1 m above ground surface, using the results of a

simultaneous measurement of gamma radiation in the air at the same height, and taking into account temperature and intensity of atmospheric precipitation.

2. Performance of the tasks referred to in §4(2) consist in the continuous collection of atmospheric aerosols on filter through which atmospheric air flows, sucked at the height of 1-1.5 m above ground surface, in the continuous spectroscopic measurement of gamma radiation emitted by aerosols collected on the filter, and on laboratory spectroscopic measurement of gamma radiation emitted from the aerosols deposited on the filter after one-week long sample collection.

3. Performance of the task referred to in §4(3) consist in the continuous atmospheric aerosol collection on a filter through which atmospheric air flows, sucked at the height of 1-1.5 m above ground surface, and in the continuous measurement of alpha and beta radiation emitted by aerosols collected on the filter, and on laboratory spectroscopic measurement of gamma radiation emitted from the atmospheric aerosols collected during 1 hour.

4. Performance of the task referred to in §5(1) consists in the continuous dose rate measurement at the height of 1 m above ground surface.

§7. Tasks of basic units include:

- 1) Conduct of measurements of the radioactive isotope content in samples of:
 - a) Surface water, in particular water from the following rivers: Wisła, Odra, Narew and Warta, in the vicinity of main water intakes – of cesium Cs-137 over 1 becquerel per liter (Bq/l) and strontium Sr-90 over 0.6 Bq/l,
 - b) Potable water from water-pipe network in Polish cities – regional capital cities and cities with population numbers over 200 000 – of cesium Cs-137 over 0.1 Bq/l, and strontium Sr-90 over 0.06 Bq/l,
 - c) Milk and other food products, constituting basic components of an average food ration – of cesium Cs-137 over 0.5 Bq/l, and strontium Sr-90 over 0.2 Bq/l,
 - d) Raw feeding stuff – of cesium Cs-134 and Cs-137 over 250 Bq/kg;
- 2) Maintaining the records of samples taken,
- 3) Maintaining the records of measurement results,
- 4) Participation in benchmark measurements, organized by the Agency's President at least once every year.

§8. Samples referred to in §7(1) shall be taken:

- 1) Under normal conditions – in locations indicated by the Chief Sanitary Inspector, in agreement with the Chief Environmental Protection Inspector and the Agency's President, with at least the following frequency:
 - a) For milk, food products and potable water – once every quarter,
 - b) For river water – twice a year, in the spring and autumn,
- 2) In radiation emergency situation – in locations and with frequencies established by the Agency's President, depending on the emergency scenario.

§9.1. Tasks of specialized units include:

- 1) Conduct of measurements of radioactive isotope content in samples of:
 - a) Milk, potable water and food products – of artificial alpha-radioactive isotopes, in particular plutonium Pu-239 and americium Am-241, over 1 Bq/l, or
 - b) Surface waters – of cesium Cs-137 over 0.1 Bq/l, and strontium Sr-90 over 0.06 Bq/l, or
 - c) Potable water:
 - of cesium 137 over 0.02 Bq/l and strontium Sr-90 over 0.01 Bq/l, or
 - of hydrogen H-3 over 10 Bq/l, or
 - of natural alpha-radioactive isotopes in case of exceeding 0.1 Bq/l of total activity of alpha-radioactive isotopes, and of natural beta-radioactive isotopes in case of exceeding 1 Bq/l of total activity of beta-radioactive isotopes, or
 - d) Milk and food products – of artificial gamma-radioactive isotopes, in particular cesium Cs-137 over 0.1 Bq/l, and artificial beta-radioactive isotopes, in particular strontium Sr-90 over 0.06 Bq/l, or
 - e) Environmental materials, including
 - Soil – of cesium Cs-137 over 1 kilo-becquerel per square meter (kBq/m²), or
 - Bottom sediments – of cesium Cs-137 over 1 Bq/kg and plutonium isotopes Pu-238, Pu-239, Pu-240 over 0.1 Bq/kg, or
 - Total precipitation – cesium Cs-137 over 0.05 becquerel per square meter times one month (Bq/m² x month), and strontium Sr-90 over 0.05 becquerel per square meter times three months (Bq/m² x 3month);
- 2) Maintaining the records of samples taken,
- 3) Maintaining the records of measurement results,
- 4) Participation in benchmark measurements, organized by the Agency's President at least once every two years;

5) Developing the proposals for measuring techniques for qualitative and quantitative radioactive isotope assays in environmental materials and in food products, and submitting them to the Agency's President for approval.

2. Location and frequency of taking the samples referred to in paragraph 1(1), and the scope of measurements shall be established:

- 1) For normal conditions – in measurement programs developed by the entities where these units are operated, and approved by the Agency's President.
- 2) For radiation emergency situation – by the Agency's President, depending on the emergency scenario.

§10.1. Performance of tasks referred to in §7(2) and §9(1)(2) shall consist in maintaining the register of samples taken, which shall contain:

- 1) Description of the sample type and of the method of sample preparation for measurement,
- 2) Date and hour of the start and completion of sample-taking,
- 3) Information on the site where the sample has been taken, including the locality's name and detailed determination of the site location within this locality.

2. Performance of tasks referred to in §4(5) and §5(3), §7(3) and §9(1)(3) shall consist in maintaining the register of measurement results, which shall contain:

- 1) Name, address and code of the station or unit performing the measurements, and in case of the station – also geographic coordinates of its location,
- 2) In case of stations performing the tasks referred to in §4(2) and §4(3), and in case of units – the name and symbol of the isotope, for which the content is measured,
- 3) Description of the method of performing the measurement,
- 4) Description of the type of equipment used for measuring, and of the measuring detector type,
- 5) Measurement result, together with measuring error.

§11. Performance of tasks referred to in §7(1) and §9(1)(1) shall consist in particular in sample concentration, chemical isolation of isotopes and measuring the radiation emitted from prepared samples.

§12. Units shall deliver the results of measurements of isotope content in the samples referred to in §7(1) and §9(1)(1) to the Agency's President with frequency established:

- 1) For normal conditions – in measurement programs developed by the entities where the units are operated, and approved by the Agency's President,

- 2) For radiation emergency situation – by the Agency’s President, dependent on the emergency scenario.

§13. In case of basic stations operated in the entities of the minister competent for environmental matters, listed in Annex 1 to this Regulation, provision of §4(1) shall apply from 1 January 2006.

§14. Regulation shall enter into force on 1 January 2003.

ANNEXES

ANNEX 1

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

1. Basic stations:

- a) Operated in the National Atomic Energy Agency and in the entities of the minister competent for economy, sited in the following locations:

City/town	Region (“województwo”)
1) Białystok	podlaskie
2) Gdynia	pomorskie
3) Koszalin	zachodniopomorskie
4) Kraków	małopolskie
5) Lublin	lubelskie
6) Łódź	łódzkie
7) Olsztyn	warmińsko-mazurskie
8) Sanok	podkarpackie
9) Szczecin	zachodniopomorskie
10) Toruń	kujawsko-pomorskie
11) Warszawa	mazowieckie
12) Wrocław	dolnośląskie
13) Zielona Góra	lubuskie

- b) Operated in the entities of the minister competent for environment matters, sited in the following locations:

City/town	Region (“województwo”)
1) Gdynia	pomorskie
2) Gorzów Wielkopolski	lubuskie
3) Legnica	dolnośląskie
4) Lesko	podkarpackie
5) Mikołajki	warmińsko-mazurskie
6) Świnoujście	zachodniopomorskie
7) Warszawa	mazowieckie
8) Włodawa	lubelskie
9) Zakopane	małopolskie

2. Subsidiary stations, operated in the entities of the Minister of National Defense, sited in the following locations:

City/town	Region ("województwo")
1) Bartoszyce	warmińsko-mazurskie
2) Bydgoszcz	Kujawsko-pomorskie
3) Gdynia	pomorskie
4) Kraków	małopolskie
5) Lublin	lubelskie
6) Rzeszów	podkarpackie
7) Śrem	wielkopolskie
8) Świnoujście	zachodniopomorskie
9) Szczecin	zachodniopomorskie
10) Ustka	pomorskie
11) Warszawa	mazowieckie
12) Wrocław	dolnośląskie
13) Żagań	lubuskie

ANNEX 2

LIST OF UNITS FOR RADIOACTIVE CONTAMINATION MEASUREMENTS, WITH DIVISION INTO BASIC AND SPECIALIZED STATIONS

1. Basic units – sanitary-epidemiological stations (SSE), sited in the following locations:

City/town	Region ("województwo")
1) Białystok	podlaskie
2) Łomża	podlaskie
3) Bydgoszcz	kujawsko-pomorskie
4) Toruń	kujawsko-pomorskie
5) Włocławek	kujawsko-pomorskie
6) Gdańsk	pomorskie
7) Słupsk	pomorskie
8) Gorzów Wielkopolski	lubuskie
9) Zielona Góra	lubuskie
10) Katowice	śląskie
11) Bielsko-Biała	śląskie
12) Częstochowa	śląskie
13) Kielce	świętokrzyskie
14) Kraków	małopolskie
15) Tarnów	małopolskie
16) Nowy Sącz	małopolskie
17) Lublin	lubelskie
18) Zamość	lubelskie
19) Chełm	lubelskie
20) Biała Podlaska	lubelskie
21) Łódź	łódzkie
22) Piotrków Trybunalski	łódzkie
23) Skierniewice	łódzkie
24) Zduńska Wola	łódzkie

25)	Olsztyn	warmińsko-mazurskie
26)	Elbląg	warmińsko-mazurskie
27)	Opole	opolskie
28)	Poznań	wielkopolskie
29)	Kalisz	wielkopolskie
30)	Leszno	wielkopolskie
31)	Piła	wielkopolskie
32)	Konin	wielkopolskie
33)	Rzeszów	podkarpackie
34)	Przemyśl	podkarpackie
35)	Sanok	podkarpackie
36)	Tarnobrzeg	podkarpackie
37)	Szczecin	zachodniopomorskie
38)	Koszalin	zachodniopomorskie
39)	Warszawa	mazowieckie
40)	Ciechanów	mazowieckie
41)	Ostrów Mazowiecka	mazowieckie
42)	Płock	mazowieckie
43)	Radom	mazowieckie
44)	Siedlce	mazowieckie
45)	Wrocław	dolnośląskie
46)	Jelenia Góra	dolnośląskie
47)	Legnica	dolnośląskie
48)	Wałbrzych	dolnośląskie

2. Specialized units:

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