/*The State Emblem of the Russian Federation*/

**FEDERAL ENVIRONMENTAL, INDUSTRIAL AND NUCLEAR SUPERVISION SERVICE
(ROSTECHNADZOR)**

|  |  |  |  |
| --- | --- | --- | --- |
| *June 28, 2024* | **ORDER** | **No.** | *201* |
|  | Moscow |  |  |

/*Stamp*/:/*The State Emblem of the Russian Federation*/ \* MINISTRY OF JUSTICE OF THE RUSSIAN FEDERATION \* REGISTERED \* Registration No. *79642* \* dated *October* *1,* 20*24*

**On approval of federal rules and regulations in the field of the use of atomic energy “Requirements for declaring states of emergency preparedness, emergency situation and the procedure of on-line transmission of information at nuclear fuel cycle facilities” (NP-078-24)**

As provided in Article 6 of Federal Law No. 170-FZ dated November 21, 1995 “On the Use of Atomic Energy” and sub-item 5.2.2.1 of item 5 of the Regulation on the Federal Environmental, Industrial and Nuclear Supervision Service approved by Decree of the Government of the Russian Federation No. 401 dated July 30, 2004, I hereby order to:

approve the attached federal rules and regulations in the field of the use of atomic energy “Requirements for declaring states of emergency preparedness, emergency situation and the procedure of on-line transmission of information at nuclear fuel cycle facilities” (NP-078-24).

|  |  |  |
| --- | --- | --- |
| Chairman | /*Signature*/ | A.V. Trembitskiy |

/*The State Emblem of the Russian Federation*/

**FEDERAL ENVIRONMENTAL, INDUSTRIAL AND NUCLEAR SUPERVISION SERVICE**

**(ROSTECHNADZOR)**

|  |  |  |  |
| --- | --- | --- | --- |
| *July 10, 2024* | **ORDER** | **No.** | *216* |
|  | Moscow |  |  |

**Concerning the annulment of Regulation on the Federal Environmental, Industrial and Nuclear Supervision Service No. 15 dated December 27, 2006 “On approval and enforcement of federal rules and regulations in the field of the use of atomic energy ‘Regulation on the procedure of state declarations of emergency preparedness, emergency situation and on-line transmission of information in the event of radiation hazardous situations at nuclear fuel cycle factories”**

As provided in Article 6 of the Federal Law No. 170-FZ dated November 21, 1995 “On Use of Nuclear Energy” and sub-item 5.2.2.1 of item 5 of Regulation on the Environmental, Industrial and Nuclear Supervision Service approved by Decree of the Government of the Russian Federation No. 401 dated July 30, 2004, I hereby order to:

1. Recognize as null and void the Regulation on the Federal Environmental, Industrial and Nuclear Supervision Service No. 15 dated December 27, 2006 “On approval and enforcement of federal rules and regulations in the field of the use of atomic energy ‘Regulation on the procedure of state declarations of emergency preparedness, emergency situations and on-line transmission of information in the event of radiation hazardous situations at nuclear fuel cycle factories”.

/*Stamp*/: FSFI Scientific and Technical Center of Nuclear and Radiation Safety \*
Sector No. *59* \* Date *07/10/2024* \* Number of sheets *2*

2. This Order shall enter into force on the date of entry into force of Order of the Federal Environmental, Industrial and Nuclear Supervision Service No. 201 dated June 28, 2024 “On approval of federal rules and regulations in the field of the use of atomic energy ‘Requirements for declaring states of emergency preparedness, emergency situation and the procedure of on-line transmission of information at nuclear fuel cycle facilities’ (NP-078-24).”

|  |  |  |
| --- | --- | --- |
| Chairman | /*Signature*/ | A.V. Trembitskiy |

APPROVED
by Order of the Federal Environmental, Industrial and Nuclear Supervision Service

dated June 28, 2024 No. 201

**Federal rules and regulations in the field of the use of atomic energy “Requirements for declaring states of emergency preparedness, emergency situation and the procedure of on-line transmission of information at nuclear fuel cycle facilities”
(NP-078-24)**

I. Purpose and scope of application

1. Federal rules and regulations in the field of the use of atomic energy “Requirements for declaring states of emergency preparedness, emergency situation and the procedure of on-line transmission of information at nuclear fuel cycle facilities” (NP-078-24) (hereinafter referred to as the Rules) enforce the requirements to:

the declaration of the states of “Emergency Preparedness” (high alert regime) (hereinafter referred to as the state of “Emergency Preparedness”) (terms and definitions used are given in Appendix No. 1 to the Rules) and “Emergency Situation” (emergency situation regime) (hereinafter referred to as the state of “Emergency Situation”), including criteria for declaration of the above states, notification procedure, technical and organizational measures to ensure emergency response, and emergency drills;

the procedure of on-line transmission of information specified in items 13 to 15 of the Rules.

2. The requirements of the Rules shall be binding for:

by operating organizations engaged in activities in the field of the use of atomic energy with respect to nuclear fuel cycle facilities (hereinafter referred to as NFCFs) specified in paragraph 2.2 of federal rules and regulations in the field of the use of atomic energy “General Provisions for Ensuring Safety of Nuclear Fuel Cycle Facilities” (NP-016-05), approved by Resolution of the Federal Environmental, Industrial and Nuclear Supervision Service No. 11 dated December 2, 2005[[1]](#footnote-1),as amended by Order of the Federal Environmental, Industrial and Nuclear Supervision Service No. 326 dated July 28, 2014[[2]](#footnote-2);

organizations performing work and providing services in the field of the use of atomic energy for operating organizations specified in the second paragraph of this item.

3. The Rules apply to NFCFs being designed, constructed, operated and decommissioned (closed).

4. The timeframe and scope of measures required to bring NFCFs into compliance with the Rules are determined on a case-by-case basis in the terms and conditions of the operation or decommissioning license.

**II. Criteria for declaring states of “Emergency Preparedness” and “Emergency Situation”**

5. The criteria for declaring the state of “Emergency Preparedness” are:

implementation of external natural or man-made processes, phenomena or factors of hazard degree I or II in terms of the consequences of impact on the nuclear facility[[3]](#footnote-3);

violation of the safe operation limits of the NFCF, which resulted in exceeding the values of external dose rate and/or volumetric activity of radionuclides in the air, and/or concentration of pollutants in the air established by the operating organization or given in the columns “State of Emergency Preparedness” of Tables No. 1 to 3 of Annex No. 2 to the Rules, provided that the values of external dose rate and/or volumetric activity of radionuclides in the air, and/or concentration of pollutants in the air given in the columns “State of Emergency Situation” of Tables No. 1 to 3 of Annex No. 2 to the Rules are complied with.

6. The criteria for declaring the state of “Emergency situation” are:

violation of safe operation limits of the NFCF, which resulted in exceeding the values of external dose rate and/or volumetric activity of radionuclides in the air, and/or concentration of pollutants in the air given in columns “State of Emergency Situation” of tables No. 1 to 3 of Appendix No. 2 to the Rules;

the occurrence of self-sustaining nuclear fission chain reaction.

7. If there are no facts of violation of the safe operation limits of the NFCF as stipulated in paragraph three of item 5 and paragraph two of item 6 of the Rules, the declaration of the states of “Emergency Preparedness” or “Emergency Situation” is not required.

III. State declarations of “Emergency preparedness” and “Emergency situation”

8. The following shall be approved at the NFCF:

the procedure for communicating information from the NFCF employees (personnel), who discovered that the criteria set forth in items 5 and 6 of the Rules had been met, to persons authorized to make decisions on declaring the states of “Emergency Preparedness” and “Emergency Situation”;

the criteria for declaring the state of “Emergency Preparedness” established in accordance with item 5 of the Rules, including the values of external dose rate, volumetric activity of radionuclides in the air, concentration of pollutants in the air, which do not exceed the values given in the columns “State of Emergency Preparedness” of Tables No. 1 to 3 of Annex No. 2 to the Rules;

the notification chart for the day-to-day management bodies of the functional subsystem of control over nuclear- and radiation-hazardous facilities of the unified state system for prevention and mitigation of emergencies[[4]](#footnote-4) (hereinafter referred to as RUERS), day-to-day management bodies of the RUERS functional subsystems of the relevant state authorities for the use of atomic energy[[5]](#footnote-5) and RUERS territorial subsystems functioning in the territories within the protective action planning zone of the NFCF (if there is such a zone) (hereinafter referred to as emergency responders), as well as the NFCF employees (personnel).

9. Persons authorized to make decisions on declaring the states of “Emergency Preparedness” and “Emergency Situation” and on putting into effect the action plan for the protection of the NFCF employees (personnel) in the event of an accident at the NFCF, as well as persons authorized to declare the states of “Emergency Preparedness” and “Emergency Situation”, shall be determined by the action plan for protection of the employees (personnel) in the event of an accident at the NFCF.

10. The states of “Emergency Preparedness” and/or “Emergency Situation” shall be declared by authorized persons by notifying the NFCF employees (personnel) and persons at the NFCF site when the criteria established in items 5 and 6 of the Rules have been reached.

11. When the state of “Emergency Preparedness” is declared, the forces and means specified in the documents of the operating organization for preventing accidents at the NFCF and mitigating their consequences shall be put on standby, and the action plan to protect the employees (personnel) in the event of an accident at the NFCF shall be put into effect.

12. The declared states of “Emergency Preparedness” and “Emergency Situation” are subject to revocation provided that the action plan to protect the employees (personnel) in the event of an accident at the NFCF and the criteria that led to the declaration of these states are fulfilled.

IV. Procedure of communication and on-line transmission of information

13. Not later than 15 minutes from the moment of detection of achievement of the criteria established in accordance with items 5 and 6 of the Rules:

information on the declaration of the states of “Emergency Preparedness” and/or “Emergency Situation” and the introduction of the action plan to protect the employees (personnel) in the event of an accident at the NFCF shall be communicated to the NFCF employees (personnel) and persons at the NFCF site in accordance with the notification chart approved by the operating organization;

the operating organization shall assess the possible scale of the accident consequences (limited to a room (building); limited to the territory of the NFCF site; limited to the sanitary protection zone (if there is such a zone); not limited to the territory of the NFCF site and the sanitary protection zone (if there is such a zone)).

14. For an NFCF classified as Category I or II in terms of potential radiation hazard[[6]](#footnote-6), no later than 15 minutes after the declaration of the states of “Emergency Preparedness” or “Emergency Situation”, the following information shall be communicated to emergency responders:

the name of the operating organization;

the name of the nuclear fuel cycle facility;

date and time of achievement of the criteria established in items 5 and 6 of the Rules;

declared state (“Emergency preparedness” or “Emergency situation”);

grounds for declaring the states of “Emergency Preparedness” or “Emergency Situation” in accordance with items 5 and 6 of the Rules;

possible scale of accident consequences determined in accordance with the third paragraph of item 13 of the Rules;

weather conditions at the NFCF site, in the sanitary protection zone (if there is such a zone) and beyond.

15. For an NFCF classified as Category III or IV in terms of potential radiation hazard, the information specified in item 14 of the Rules shall be communicated to the emergency responders no later than 1 hour after the declaration of the state of “Emergency Preparedness” or the state of “Emergency Situation.”

**V. Technical and organizational measures
 taken by the operating organization to ensure emergency response**

16. The NFCF shall ensure the availability and operability of communications equipment necessary to communicate information on the declaration of the states of “Emergency Preparedness” and “Emergency Situation”, on the activation of the action plan to protect personnel in the event of an accident at the NFCF, and on the possible scale of accident consequences to emergency responders.

17. The operating organization shall establish a permanent commission for emergency prevention and mitigation and for fire safety to act as a coordinating body for emergency response, including the employees (personnel) of the NFCF.

18. An analytical group shall be established by the operating organization to provide scientific, technical and advisory support to the commission for emergency prevention and mitigation and for fire safety.

19. When the state of “Emergency Preparedness” or the state of “Emergency Situation” is declared, the analytical group shall perform the following tasks:

assessment of radiation exposure for the employees (personnel) and preparation of recommendations on measures for their protection;

analysis and assessment of radiation exposure for the public and the environment (only for NFCFs classified as categories I and II in terms of potential radiation hazard);

preparation of proposals on measures to protect the public (only for NFCFs classified as categories I and II in terms of potential radiation hazard);

development of measures to eliminate accident consequences based on the emerging radiation situation (when the state of “Emergency Situation” is declared).

20. Prior to managing nuclear materials, radioactive substances or radioactive waste, emergency centers shall be established at the NFCF (in the case of NFCFs classified as categories I and II in terms of potential radiation hazard), and premises shall be identified for the analytical group to carry out its tasks (in the case of NFCFs classified as categories III and IV in terms of potential radiation hazard).

21. The operating organization shall appoint persons from among the employees (personnel) of the NFCF to perform assessments of the integrity of the physical barriers of the NFCF and quantitative assessments of the release of radioactive substances outside the physical barriers when the state of “Emergency Preparedness” or the state of “Emergency Situation” is declared, and to submit the results of these assessments to the analytical group no later than 15 minutes after the declaration of these states.

22. The technical equipment, characteristics of the emergency centers and premises, and the membership of the analytical group shall ensure the performance of the tasks specified in item 19 of the Rules for all initiating events of design basis accidents and beyond design basis accidents, the lists of which are established in the project of the NFCF.

23. The operating organization of an NFCF classified as category I and II in terms of potential radiation hazard shall ensure that the emergency center:

has and operates means of communication with the central and local NFCF control centers (panels);

has and operates automated workstations for the work of the commission for emergency prevention and mitigation and for fire safety, as well as members of the analytical group;

has instant access to the project and operational documentation of the NFCF;

is able to activate a local warning system.

24. The operating organization of NFCFs classified as category I in terms of potential radiation hazard shall provide data on the radiation situation in the premises of these NFCFs, at their site, in the sanitary protection zone, and in the radiation control zone to:

emergency responders (except for those at the NFCF and at the NFCF site) – in real time;

emergency responders at the NFCF and at the NFCF site – at their request.

25. To verify practical skills and readiness for emergency response, the operating organization shall ensure that emergency drills are conducted at least once a year in accordance with the approved schedule of emergency drills, with the involvement of the analytical group. The emergency drills shall cover initiating events of design basis accidents and beyond design basis accidents, the lists of which are established in the NFCF project.

26. The operating organization shall communicate the annual schedule of emergency drills and notify the permanent management bodies of the functional subsystem of control over nuclear and radiation hazardous facilities of the RUERS at the federal level (for NFCFs classified as categories I and II in terms of potential radiation hazard) and at the interregional level (for NFCFs of all categories in terms of potential radiation hazard), and ensure that these bodies can participate in the planned emergency drills.

Messages transmitted as part of emergency drills shall be labeled “Emergency drill.”

APPENDIX No. 1
 to federal rules and regulations in the field of the use of atomic energy
“Requirements for declaring states of
emergency preparedness, emergency
 situation and the procedure of on-line transmission of information at nuclear fuel cycle facilities” approved by Order of the Federal Environmental,
 Industrial and Nuclear Supervision Service
dated June 28, 2024 No. 201

Terms and definitions

**1. The state of “Emergency Preparedness” (high readiness regime)** is a regime of operation of the operating organization under the conditions of a pre-emergency situation at the NFCF, within the framework of which actions are taken to prevent accidentsand to prepare for mitigation of their possible consequences.

**2. The state of “Emergency Situation” (emergency situation regime)** is a regime of operation of the operating organization under the conditions of an accident at the NFCF, within the framework of which actions to mitigate the consequences of the accident are performed.

APPENDIX No. 2
 to federal rules and regulations in the field of the use of atomic energy “Requirements for declaring states of emergency preparedness, emergency situation and the procedure of on-line transmission of information at nuclear fuel cycle facilities” approved by Order of the Federal Environmental, Industrial and Nuclear Supervision Service dated June 28, 2024 No. 201

**Values of external dose rate, volumetric activity of radionuclides in the air, and concentrations of pollutants in the air used to declare the states of “Emergency Preparedness” and “Emergency Situation”**

Table No. 1

**Values of external dose rate**

|  |  |  |
| --- | --- | --- |
| **Monitoring point** | **State of “Emergency preparedness”** | **State of “Emergency situation”** |
| Permanently attended rooms | 100 mcSv/h | 600 mcSv/h |
| Territory of the nuclear fuel cycle facility site and sanitary protection zone (if there is such a zone) | 25 mcSv/h | 200 mcSv/h |
| Beyond the territory of the nuclear fuel cycle facility site and sanitary protection zone (if there is such a zone) | 10 mcSv/h | 20 mcSv/h |

Table No. 2

**Values of volumetric activity of radionuclides in the air**

|  |  |  |
| --- | --- | --- |
| **Monitoring point** | **State of “Emergency preparedness”** | **State of “Emergency situation”** |
| Permanently attended rooms | **Exceedance rate for personnel of the permissible annual average volumetric activity[[7]](#footnote-7) of radionuclides in the air of premises for which reference levels of volumetric activity in the air of premises have been established, and which are taken into account in the assessment of accident consequences in the safety analysis of the NFCF** |
| 100 | 500 |
| Beyond the territory of the nuclear fuel cycle facility site and sanitary protection zone (if there is such a zone) | **Exceedance rate for the public of the permissible annual average volumetric activity[[8]](#footnote-8) of radionuclides in the air, for which maximum permissible emission standards and control levels of volumetric activity in the atmospheric air are established, and which are taken into account in the assessment of accident consequences in the safety analysis of the NFCF** |
| 2 | 500 |

Table No. 3

**Values of pollutant concentrations[[9]](#footnote-9) in the air**

|  |  |  |
| --- | --- | --- |
| **Monitoring point** | **State of “Emergency preparedness”** | **State of “Emergency situation”** |
| Permanently attended rooms | **Exceedance rate of maximum permissible concentrations of pollutants in the air of working area premises[[10]](#footnote-10)** |
| Set by the operating organization, but not higher than the value of exceedance rate of maximum permissible concentrations of pollutants in the air of working area premises, established when the state of “Emergency Situation” of this table is declared. | 10 – for hazardous chemicals with acute effects[[11]](#footnote-11) |
| 20 – for hazardous chemical substances5 |

1. Registered by the Ministry of Justice of the Russian Federation on February 1, 2006, registration No. 7433. [↑](#footnote-ref-1)
2. Registered by the Ministry of Justice of the Russian Federation on August 28, 2014, registration No. 33890 [↑](#footnote-ref-2)
3. Appendix No. 3 to federal rules and regulations in the field of the use of atomic energy “Accounting of external impacts of natural and man-made origin on nuclear facilities” (NP-064-17), approved by Order of the Federal Environmental, Industrial and Nuclear Supervision Service No. 514 dated November 30, 2017 (registered by the Ministry of Justice of the Russian Federation on December 26, 2017, registration No. 49461). [↑](#footnote-ref-3)
4. Paragraph fourteen of the Regulations on the functional subsystem of control over nuclear and radiation hazardous facilities of the unified state system for prevention and mitigation of emergencies, approved by Order of the Federal Environmental, Industrial and Nuclear Supervision Service No. 236 dated June 28, 2021 (registered by the Ministry of Justice of the Russian Federation on December 20, 2021, registration No. 66445). [↑](#footnote-ref-4)
5. Paragraph sixteen of the Regulations on the functional subsystem for prevention and elimination of emergencies in organizations (facilities) under the jurisdiction and within the scope of activities of the State Corporation Rosatom, the unified state system for prevention and elimination of emergencies, approved by Order of the State Corporation Rosatom No. 1/16-NPA dated December 9, 2021 (registered by the Ministry of Justice of the Russian Federation on March 28, 2022, registration No. 67943), as amended by Order of the State Corporation Rosatom No. 1/8-NPA dated May 19, 2024 (registered by the Ministry of Justice of the Russian Federation on August 14, 2024, registration No. 79144). [↑](#footnote-ref-5)
6. Paragraphs 3.1.2 and 3.1.3 of sanitary codes and rules SP 2.6.1.1.2612-10 “Basic Sanitary Rules for Radiation Safety (OSPORB-99/2010)”, approved by Resolution of the Chief Public Health Officer of the Russian Federation No. 40 dated April 26, 2010 (registered by the Ministry of Justice of the Russian Federation on August 11, 2010, registration No. 18115), as amended by Resolution of the Chief Public Health Officer of the Russian Federation No. 43 dated September 16, 2013 (registered by the Ministry of Justice of the Russian Federation on November 5, 2013, registration No. 30309). [↑](#footnote-ref-6)
7. The column “Permissible average annual volumetric activity PVApersonnel, Bq/m3” of the table “Values of dose coefficients, annual airborne intake limit and permissible annual average volumetric activity in the air of individual radionuclides for personnel” of Appendix No. 1 of sanitary codes and rules SanPiN 2.6.1.2523-09 “Radiation Safety Standards (NRB-99/2009)” approved by Resolution of the Chief Public Health Officer of the Russian Federation No. 47 dated July 7, 2009 (registered by the Ministry of Justice of the Russian Federation on August 14, 2009, registration No. 14534) (hereinafter referred to as NRB-99/2009). [↑](#footnote-ref-7)
8. The column “Permissible average annual volumetric activity” of the table “Values of annual airborne and food intake limits and permissible volumetric activity in inhaled air of individual radionuclides for critical population groups” of Appendix No. 2 to NRB-99/2009. [↑](#footnote-ref-8)
9. Paragraph eighteen of Article 1 of Federal Law No. 7-FZ “On Environmental Protection” dated January 10, 2002. [↑](#footnote-ref-9)
10. The column “Maximum permissible concentration, mg/m3” of Table 2.1 to paragraph six of sanitary codes and rules SanPiN 1.2.3685-21 “Hygienic standards and requirements to ensure the safety and/or harmlessness of environmental factors of habitat to humans,” approved by Resolution of the Chief Public Health Officer of the Russian Federation No. 2 dated January 28, 2021 (registered by the Ministry of Justice of the Russian Federation on January 29, 2021, registration No. 62296), as amended by Resolution of the Chief Public Health Officer of the Russian Federation No. 24 dated December 30, 2022 (registered by the Ministry of Justice of the Russian Federation on March 9, 2023, registration No. 72558). In accordance with paragraph three of the Resolution of the Chief Public Health Officer of the Russian Federation No. 2 dated January 28, 2021, this act is valid until March 1, 2027. [↑](#footnote-ref-10)
11. Subparagraph “b” of the column “Accident Consequences” of line A5 of Table No. 1 “Categorization of accidents at NFCFs, commercial reactors” of Appendix No. 2 to the federal rules and regulations in the field of the use of atomic energy “Regulations on the procedure for investigation and accounting of operational occurrences of nuclear fuel cycle facilities” (NP-047-11), approved by Order of the Federal Environmental, Industrial and Nuclear Supervision Service No. 736 dated December 23, 2011 (registered by the Ministry of Justice of the Russian Federation on January 19, 2012, registration No. 22965), as amended by Orders of the Federal Environmental, Industrial and Nuclear Supervision Service No. 310 dated July 15, 2013 (registered by the Ministry of Justice of the Russian Federation on August 14, 2013, registration No. 29388) and No. 397 dated November 1, 2023 (registered by the Ministry of Justice of the Russian Federation on January 30, 2024, registration No. 77057). [↑](#footnote-ref-11)