NUCLEAR SAFETY REQUIREMENTS
BSR-1.9.3-2016

RADIATION PROTECTION AT NUCLEAR FACILITIES

CHAPTER I
GENERAL PROVISIONS

1. Nuclear Safety Requirements BSR-1.9.3-2016 "Radiation protection at nuclear facilities" (hereinafter – "the Requirements") set out the requirements for radiation protection of the exposed workers operating at nuclear facilities (hereinafter – the "worker"), also for other persons operating at nuclear facilities (hereinafter – "the NF"), and not classified neither as category A or category B workers (hereinafter – "another person"), as well as for the visitors.

2. The Requirements shall be mandatory to the persons, who are the holders of licences specified in items 2 and 4, paragraph 1 of Article 22 of the Law on Nuclear Safety of the Republic of Lithuania and /or the holders of permits specified in items 1 and 2, paragraph 2 of Article 22 of the Law on Nuclear Safety of the Republic of Lithuania (hereinafter – "the licence or permit holder").

3. When applying and implementing the provisions of the Requirements, a graded approach shall be taken into account, this is the resources allocated for ensuring occupational radiation protection shall be commensurate with the likelihood and magnitude of exposure, determined by the activity.

4. The provisions of the Requirements with regard to the activities of the NF other than a nuclear power plant may not be applied or applied partially if, having taken into consideration the risk associated with the exposure to ionising radiation resulting from the activity of the NF, the implementation of such provisions is not expedient or practically impossible due to the phase of the NF lifecycle, its structure (technology), the installed protection barriers, and exposure pathways, and the non-application of the aforementioned provisions does not or could not result in the situation when the exposure of workers and members of the public would exceed the dose limits specified in the legislation referred to in paragraph 5.5 of the Requirements and would not be as low as reasonably achievable taking into account economic and social factors. In the documentation referred to in the Requirements, the licence or permit holder shall specify the provisions, which will be not applied or applied partially, the alternative measures to ensure radiation protection and reason that non-implementation or partial implementation of these provisions will not adversely affect radiation protection of workers, other persons, and visitors. The State Nuclear Power Safety Inspectorate (VATESI) shall adopt positive decision in respect of this justification, if the information proving that the NF activities satisfy the criteria laid down in this provision is provided.

CHAPTER II
LIST OF REFERENCES

5. The Requirements contain references to the following legal acts:

5.1. Nuclear Safety Requirements BSR-1.9.1-2017 "Standards of release of radionuclides from nuclear installations and requirements for the plan on release of radionuclides", approved by Order No 22.3-89 of the Head of the State Nuclear Power Safety Inspectorate (VATESI) of 27 September 2011 "On the approval of Nuclear Safety Requirements BSR-1.9.1-2017 'Standards of release of radionuclides from nuclear installations and requirements for the plan on release of radionuclides'";

5.2. Nuclear Safety Requirements BSR-1.9.2-2018 “Identification and Application of Radionuclide Free-Release Levels for Substances and Wastes arising from Nuclear Activities with Sources of Ionising Radiation”, approved by Order No 22.3-90 of the Head VATESI of 27 September 2011 “On the approval of Nuclear Safety Requirements BSR-1.9.2-2018 ‘Identification and Application of Radionuclide Free-Release Levels for Substances and Wastes arising from Nuclear Activities with Sources of Ionising Radiation’“;

5.3. Nuclear Safety Requirements BSR-1.9.4-2019 “On Procedure of Obligatory Radiation Protection Training, Examination, Briefing of Radiation Workers, Radiation Protection Officers and Physical Protection Officers Involved in Activities with Sources of Ionising Radiation in Nuclear Energy Area and of Certification of Natural Persons Seeking to Obtain Right to Teach Radiation Protection”, approved by Order No 22.3-73 of the Head VATESI of 29 April 2016 “On the Approval of Nuclear Safety Requirements BSR-1.9.4-2019 ‘On Procedure of Obligatory Radiation Protection Training, Examination, Briefing of Radiation Workers, Radiation Protection Officers and Physical Protection Officers Involved in Activities with Sources of Ionising Radiation in Nuclear Energy Area and of Certification of Natural Persons Seeking to Obtain Right to Teach Radiation Protection’”;

5.4. Nuclear Safety Requirements BSR-1.9.7-2018 “Rules of Procedure for Recognition of Dosimetry Services”, approved by Order No 22.3-203 of the Head VATESI of 30 August 2018 “On the Approval of Nuclear Safety Requirements BSR-1.9.7-2018 ‘Rules of Procedure for Recognition of Dosimetry Services’“;

5.5. Lithuanian Hygiene Norm HN 73:2018 “Basic standards of radiation protection”, approved by Order No 663 of the Minister of Health of the Republic of Lithuania of 21 December 2001 “On the approval of the Lithuanian Hygiene Standard HN 73:2001 ‘Basic standards of radiation protection’”;

5.6. Lithuanian Hygiene Norm HN 112:2001 “Requirements for Monitoring of Internal Exposure”, approved by Order No 389 of the Minister of Health of the Republic of Lithuania of 17 July 2001 “On the approval of the Lithuanian Hygiene Standard HN 112:2001 ’Requirements for Monitoring of Internal Exposure’”;

5.7. The Rules of Procedure of Submission Data about Sources of Ionising Radiation and Data about Radiation Workers to the State Register of Sources of Ionising Radiation and Occupational Exposure, approved by Order No V-675 of the Minister of Health of the Republic of Lithuania of 24 August 2009 “On the Approval of the Rules of Procedure of Submission Data about Sources of Ionising Radiation and Data about Radiation Workers to the State Register of Sources of Ionising Radiation and Exposure of Workers”;

5.8. Order No 301 of the Minister of Health of the Republic of Lithuania of 31 May 2000 “On Preventive Health Assessments in Health Care Institutions”;

5.9. Nuclear Safety Requirements BSR-1.8.6-2019 “Technical maintenance, monitoring and examination of structures, systems and components important to nuclear facility safety”, approved by Order No 22.3-136 of the Head VATESI of 3 July 2019 “On the Approval of Nuclear Safety Requirements BSR-1.8.6-2019 ‘Technical maintenance, monitoring and examination of structures, systems and components important to nuclear facility safety’".

CHAPTER III
DEFINITIONS

6. The definitions used in the Requirements are as follows:

6.1. **Dose constraint** – a constraint set as a prospective upper bound of individual doses, used to define the range of options considered in the process of the optimisation for a given radiation source in a planned exposure situation

6.2. **Dangerous works from the radiation protection point of view** – the works in the course of which the collective dose of workers may exceed 50 person·mSv and / or the dose rate of ionising radiation in a workplace may exceed 1 mSv/h, or where more stringent radiological criteria determined by the licence or permit holder.

6.3. **Radiation Protection Programme** – a document of management system or a whole of documentation setting out the measures in place to ensure the implementation of radiation protection requirements.

6.4. **Sanitary room** – the premises between the supervised and controlled areas at the NF, which is intended for the provision of workers with individual protective equipment, and where skin decontamination and the control of radioactive contamination of workers and clothing thereof is performed.

6.5. **Sanitary lock** – the room or a part thereof in the controlled area of the NF, which is equipped with means intended for the reduction of spreading of radioactive contamination.

7. Other definitions used herein shall have the meanings assigned to them in the Law on Nuclear Safety of the Republic of Lithuania, Law on Nuclear Energy of the Republic of Lithuania, the Law on Radiation Protection of the Republic of Lithuania, as well as in other legislation governing radiation protection.

CHAPTER IV
GENERAL REQUIREMENTS FOR THE LICENCE OR PERMIT HOLDER

8. The licence or permit holder shall be responsible for radiation protection of workers, other persons, and visitors, and shall ensure that the exposure doses of such persons are as low as reasonably achievable, taking into account economic and social factors, and shall be limited in accordance with the procedure laid down in the legislation referred to in sub-paragraph 5.5 of the Requirements.

9. The licence or permit holder shall draw up the Radiation Protection Programme in which the measures for the implementation of the Requirements are specified, and shall ensure the implementation of thereof measures. Typical content of the Radiation Protection Programme is presented in Annex 1 hereto.

10. The licence or permit holder shall allocate human, technological, and financial resources to the extent necessary to ensure the efficient implementation of the Radiation Protection Programme and the supervision of implementation of this programme.

11. The licence or permit holder shall, by means of engineered controls, create such working conditions that the need to use the administrative means specified in the licence or permit-related radiation protection programme, intended to ensure radiation protection of workers (hereinafter – "the administrative means") (e.g. work permits, marking of premises, access control in regard to certain premises, etc.) and individual protective equipment are kept to a minimum. For occupational radiation protection the highest priority shall be given to engineered controls, the lower – to administrative means, and the lowest – to individual protective equipment.

12. The licence or permit holder shall ensure that workers have access to all information necessary to ensure their radiation protection during their work in the ionising radiation environment.

13. The workers shall be able to inform the licence or permit holder on the circumstances that may prejudice their radiation protection. The licence or permit holder shall keep records of the notifications reported by workers, investigate such reports, and take corrective and preventive actions.

CHAPTER V
DESIGNATION AND MANAGEMENT OF CONTROLLED AND SUPERVISED AREA

SECTION I
CONTROLLED AREA

15. The licence or permit holder shall assign the NF site boundary, the buildings within the NF site as well as the premises and parts thereof to a controlled area in accordance with paragraphs 16–23 of the Requirements.

16. All premises of buildings, which meet at least one of the following criteria, shall be assigned to the controlled area:

16.1. the worker's effective dose may exceed 6 mSv per year (considering that a worker spends at a workplace 2000 hours);

16.2. the worker's dose of internal exposure may exceed 1 mSv per year (considering that a worker spends at a workplace 2000 hours);

16.3. the surface activity of radionuclides may exceed the contamination limits specified in Annex 2 to the Requirements.

17. The roofless structures or parts thereof as well as the NF site boundary shall be assigned to the controlled area if they meet the criterion specified in sub-paragraph 16.1 of the Requirements. The surface activity of radionuclides in the aforementioned buildings, parts thereof or within the site boundary should not exceed the contamination limits specified in Annex 2 to the Requirements.

18. When designating the boundaries of the controlled area, the potential exposure of workers during normal operation of the NF as well as the potential exposure of workers and the probability of exposure in the event of deviations from normal operation of the NF, and the requirements for the controlled area management specified in herein Chapter, shall be taken into account.

19. The site boundary of the NF, the buildings, the premises and parts thereof located at the NF site may be assigned to the controlled area under the decision of the licence or permit holder and in the events when pursuant to paragraphs 16 and 17 of the Requirements such assignment is not mandatory.

20. The buildings and premises thereof located in the controlled area shall be categorised in accordance with the following requirements:

20.1. The buildings and premises of the Ignalina Nuclear Power Plant and of other NFs, where radioactive waste generated during the activities of the Ignalina Nuclear Power Plant is managed, that are located in the controlled area, shall be categorised with regard to the radiological conditions of those premises based on the criteria specified in Annex 3 to the Requirements;

20.2. For the NF buildings and premises thereof located in the controlled area, not covered by sub-paragraph 20.1 of the Requirements, under the decision of the licence or permit holder, the classification criteria other than those specified in Annex 3 to the Requirements may be applied, however, provided that such criteria are justified from the radiation protection point of view. The justification of the classification criteria for the controlled area shall be provided in the Radiation Protection Programme.

21. The NF site boundary, the roofless structures or parts thereof assigned to the controlled area shall be categorised based on the criteria of dose rate of ionising radiation only.

22. Access to the controlled area shall be restricted and controlled by physical and administrative means. Where the NF site boundary, the buildings within the NF site as well as the premises and parts thereof are assigned to the controlled area in accordance with paragraph 19 of the Requirements, restriction and control of access to the controlled area can be implemented by administrative means.

23. When identifying the boundaries of the NF controlled area, using the walls of existing buildings as well as other physical barriers is recommended.

24. In the event of identification of non-compliance to paragraphs 16, 17, 20, and 21 of the Requirements, the licence or permit holder shall immediately analyse the situation, identify the causes of the non-compliance and take corrective actions (such as application of engineering measures, deactivation of surfaces, change of boundary or category of the controlled area) to eliminate the identified non-compliance. A decision to change the boundaries or category of the controlled area that may adversely affect the exposure of workers (for example, change of category from III to II or I) can only be made in the event, when following the performed analysis, the licence or permit holder determines that non-compliance cannot be eliminated by other reasonable measures.

25. Where the radiological conditions in the part of the premises located in the controlled area do not meet the categorisation criteria established in accordance with paragraph 20 of these Requirements, and due to those practical reasons classifying of those premises to higher category is not reasonable (e.g. the non-compliance occurred in result of temporary works performed on the premises), this part of the premises shall be restricted with physical barriers and information on radiological conditions, working time restrictions, and radiation protection measures required shall be indicated in a visible location.

26. The licence or permit holder shall ensure the following:

26.1. the radioactive contamination monitoring of workers, other persons, and visitors who exit the controlled area, by carrying out the measurements of surface activity. Surface activity of skin and clothes shall not exceed the contamination limits specified in Annex 2 hereto;

26.2. the radioactive contamination monitoring of personal items (e.g. glasses, watch, writing means) carried from the controlled area and that of working tools, brought to the controlled area, by carrying out the measurements of surface activity. Having ascertained that surface activity of personal items and working tools does not exceed the contamination limits specified in Annex 2 hereto, radiation protection requirements may not be further applied to the aforementioned objects.

26.3. the radioactive contamination monitoring of the vehicles leaving the controlled area and that of any materials, equipment or objects, other than those specified in sub-paragraph 26.2 of the Requirements, which are brought or transported out of the controlled area, by carrying out the measurements of surface activity. Surface activity of the vehicles moving from the controlled area to the supervised area as well as that of the materials, equipment or objects brought or transported out of the controlled area to the supervised area shall not exceed the contamination limits specified in Annex 2 hereto. In order not to further apply the radiation protection requirements to the aforementioned materials, equipment or objects, the requirements of the legislation laid down in sub-paragraph 5.2 of the Requirements shall be followed.

27. The licence or permit holder shall mark:

27.1. the boundaries of the controlled area with the symbols consistent with the Lithuanian standard LST ISO 361:1998 ‘The basic ionising radiation symbol’ complemented with the note ‘Controlled area’;

27.2. the category of premises in such a manner that the marking of the corresponding category of a premise could be visible every time when passing from one premise of the controlled area of the NF into another;

27.3. the directions of emergency evacuation of workers in visible places in the corridors and staircases of the controlled area;

28. The licence or permit holder shall coat the surfaces of the premises of the controlled area, the equipment and furniture in these premises, that may be contaminated with radioactive materials during operation the NF with non-absorbing and easily decontaminated materials.

29. The licence or permit holder shall ensure that only those workers would access the controlled area and independently operate in it, who are authorised according to the procedure established by the licence or permit holder. Other persons and visitors shall be able to access the NF controlled area and be in this area only escorted by a worker appointed by the licence or permit

holder who shall ensure that during the stay of the aforementioned persons and visitors in the controlled area the internal rules of procedure established by the licence or permit holder are followed.

30. The controlled area (except the NF site boundary, the roofless structures or parts thereof, which are assigned to the controlled area in accordance with the criteria of dose rate of ionising radiation) shall be accessed and exited only through the sanitary room, with the exceptions specified in paragraph 31.

31. Exiting from the controlled area to the supervised area not through the sanitary room shall be allowed when all of the following conditions are satisfied:

31.1. technological or operational process shall provide for the movement of workers from one controlled area to another, or for the movement of a worker from the controlled area to the supervised area and vice versa;

31.2. when leaving the controlled area, the radioactive contamination measurement shall be performed and it shall be determined that the surface activity of the skin and protective clothing of workers as well as that of any objects carried by workers out from the controlled area does not exceed the contamination limits specified in Annex 2. The radioactive contamination monitoring upon exciting the controlled area may not be carried out when surface activity in this controlled area does not exceed the contamination limits specified in Annex 2 hereto, and access to this controlled area from other parts of the controlled area is arranged through the sanitary locks, where the function of radioactive contamination monitoring shall be implemented;

31.3. upon the completion of the shift operations in the controlled area, it shall be excited through the sanitary room.

32. The following items shall be available in sanitary rooms:

32.1. a barrier to separate the part of the room which is not contaminated with radioactive materials and the potentially contaminated one;

32.2. the facilities for the storage of the individual protective equipment contaminated with radioactive materials;

32.3. the facilities for the storage of the personal clothing and individual protective equipment of workers, other persons, and visitors;

32.4. sinks, showers, and other facilities for decontamination of workers, other persons, and visitors, installed in such way, to prevent spreading of radioactive materials to the non-contaminated part of the sanitary room;

32.5. the equipment for the measuring of the whole body surface activity located in the passages between the part potentially contaminated with the radioactive materials and the non-contaminated one.

33. The licence or permit holder shall take measures to prevent (during the movement of workers or transfer of materials, equipment, tools or objects within the controlled area to the premises with the established lower levels of contamination limits) the contamination of premises with radioactive materials exceeding the contamination limits established for those premises.

34. To prevent spreading of radioactive contamination within the controlled area, it shall be equipped with sanitary locks. Sanitary locks shall be installed as close as possible to the source of radioactive contamination or the premises in which such source is present when surface activity of such premises, equipment or objects located in thereof premises exceeds or may exceed the contamination limits established for category III controlled area. The following items shall be available in sanitary locks:

34.1. the facilities for change, storage of individual protective equipment, decontamination of hands, and, where practicable, decontamination of individual protective equipment, instruments, tools, and objects;

34.2. the radioactive contamination monitoring of skin and individual protective equipment ensured by carrying out the measurements of surface activity;

34.3. the facilities for collecting of individual protective equipment and / or working tools contaminated with radioactive materials.

35. In the locations of the controlled area, where the local rules and procedures related to the radioactive contamination monitoring are applicable, the licence or permit holder shall display such rules in the places that are visible for workers.

36. Eating, drinking, smoking, chewing gum, tobacco, consuming snuff or usage of cosmetics shall be forbidden on the premises of the controlled area, except in the specifically designated rooms that must be equipped with the facilities for hand washing and the instruments for surface activity measuring. The toilet facilities in the controlled area shall also be equipped with the facilities for hand washing and the instruments for surface activity measuring. Touchless (sensor) faucets are recommended to be used when installing sinks. When entering the premises referred to in this paragraph, workers shall wash their hands and make sure that the surface activity of the skin and protective clothing does not exceed the contamination limits set out in Annex 2 hereto. Surface activity measurements shall be carried out on these premises at regular intervals to ensure that the contamination limits set out in Annex 2 hereto are not exceeded.

SECTION II
SUPERVISED AREA

37. The licence or permit holder shall grant a status of supervised area to any area other than assigned to the controlled area but for which radiological conditions shall be kept under review due to potential impact of ionising radiation to workers, even though radiation protection measures are not needed .

38. The licence or permit holder shall:

38.1. delineate the supervised area by technical and administrative means;

38.2. mark the entrances to the supervised area with the label ‘Supervised area’;

38.3. mark the locations in which one can be exposed to higher than 1 mSv effective dose per year;

38.4. having taken into account the nature, probability and magnitude of exposure or radioactive contamination, monitor the radiological conditions in the supervised area at the intervals and by the methods specified in the workplace monitoring programme of the licence or permit holder to estimate if the buildings, the premises thereof and the boundary are properly assigned to the supervised area and radiation protection measures are not applicable;

38.5. ensure that radiological monitoring of the workers, other persons, visitors leaving the supervised area, the objects taken out of thereof area or the vehicles leaving thereof area is performed using ionising radiation detection instrumentation (e.g. portable monitors).

CHAPTER VI
ORGANISATION OF RADIATION PROTECTION

SECTION I
UNIT OR PERSON RESPONSIBLE FOR RADIATION PROTECTION

39. The licence or permit holder shall appoint a unit or person responsible for radiation protection, who must organise and supervise the implementation of radiation protection measures at the NF.

40. The unit or person responsible for radiation protection shall be provided with the resources and have the authority to the extent that any radiation protection related functions are carried out in accordance with the requirements set out in the legislation regulating radiation protection.

41. The unit or person responsible for radiation protection shall participate in the planning process of the works that may be subjected to occupational exposure. The unit or person responsible for radiation protection shall be allowed to make recommendations and comments on the aforementioned work plans, which must be taken into account.

41[1]. The unit or person responsible for radiation protection shall participate in the preparation of measures for prevention, preparedness and emergency response in case of emergency exposure situations.

42. The workers of the unit responsible for radiation protection or the person responsible for radiation protection shall have the authority to terminate the operations of workers in case when the violations of the internal rules and procedures established within the Radiation Protection Programme of the licence or permit holder are found, whereby dose limits or other restrictions on exposure to ionising radiation set by the licence or permit holder may be exceeded.

42[1]. The licence or permit holder shall enable the unit or person responsible for radiation protection to liaise and consult with a radiation protection expert qualified in accordance with the requirements of the legislation referred to in paragraph 5.3 of the Requirements, where such advice is necessary, on the following matters:

42[1].1. on optimisation and establishment of dose constraints;

42[1].2. on plans for new installations and the acceptance into service of new or modified radiation sources in relation to any engineering controls, design features, safety features and warning devices relevant to radiation protection;

42[1].3. on categorisation of controlled and supervised areas;

42[1].4. on classification of workers;

42[1].5. on the workplace and individual monitoring programmes and related personal dosimetry;

42[1].6. on radiation monitoring instrumentation;

42[1].7. on quality assurance;

42[1].8. on contamination monitoring and public exposure reduction as well as exposure monitoring measures;

42[1].9. on radioactive waste management measures;

42[1].10. on preparation of radiological accident management plans;

42[1].11. on preparedness for emergency exposure situations and emergency response operations;

42[1].12. on training and retraining programmes for exposed workers;

42[1].13. on radiological accident investigation and remedial actions;

42[1].14. on working conditions of pregnant and breastfeeding workers;

42[1].15. on preparation of radiation protection documentation.

42[2]. The unit or person responsible for radiation protection shall report to the licence or permit holder on the state of radiation protection at the NF at the intervals set by the licence or permit holder.

42[3]. The functions or a part thereof of the unit or person responsible for radiation protection may be assigned to the radiation protection expert whose qualification is recognised in accordance to the legislation referred to in sub-paragraph 5.3 of the Requirements.

SECTION II
LOCAL RULES AND PROCEDURES FOR RADIATION PROTECTION

43. For the purpose of radiation protection of workers, other persons, and visitors, the licence or permit holder shall establish the local rules and procedures within the framework of the Radiation Protection Programme, which shall include the following:

43.1. the description of the controlled and supervised area of the NF, the procedures for the management of the controlled area of the NF;

43.2. the rules of behaviour and hygiene in the controlled area of the NF;

43.3. the procedure for the monitoring of the exposure of workers, other persons, and visitors;

43.4. the procedure for workplace monitoring;

43.5. the procedure for use, testing and calibration of measuring instruments;

43.6. the procedure for use, inspecting, and testing of personal protective equipment;

43.7. the procedure for decontamination of skin and personal protective equipment;

43.8. the procedure for use of engineered controls;

43.9. the procedure for workers health surveillance;

43.10. the procedure for radiation protection training and instruction of workers;

43.11. the procedure for work planning and application of work permits;

43.12. the procedure for the optimisation of radiation protection.

CHAPTER VII
MONITORING OF INDIVIDUAL EXPOSURE AND WORKPLACES

SECTION I
GENERAL PROVISIONS
ON INDIVIDUAL EXPOSURE AND WORKPLACE MONITORING

44. The licence or permit holder shall carry out the monitoring of workers exposure and workplace in accordance with the Programme (-s) of the monitoring of workers exposure and workplaces as approved by the licence or permit holder, and shall review and update it (them) on annual basis if any changes in relation to radiological conditions in the workplaces and those due to ongoing or planned activities occur.

45. For the purposes of the monitoring of workers exposure and workplace, the licence or permit holder shall establish:

45.1. the levels of investigation of the individual exposure (external and internal) of workers, taking into account the expected exposure of workers;

45.2. the levels of investigation of workplace monitoring, taking into account the expected dose rate of ionising radiation, radioactive contamination, and operation experience;

45.3. the measures to be taken by the licence or permit holder's workers if investigation levels are exceeded.

46. The measuring instruments used for the monitoring of workers exposure and workplace monitoring shall be calibrated and tested at the intervals set by the licence or permit holder. The calibration of the measuring instruments shall be carried out by using the sources of ionising radiation designated for that purpose.

47. The licence or permit holder shall keep the records on calibration and testing of measuring instruments used for the monitoring of workers exposure and workplace.

48. The data on the monitoring of workers exposure and workplace shall be retained as follows:

48.1. the data on workplace monitoring – for 5 years, and the data on workplace monitoring used for the demarcation of the boundaries of the controlled area – for the period until the boundaries of this area are not changed;

48.2. the data on workplace monitoring used for the estimation of equivalent and effective doses of occupational exposure received by a worker as well as the information specified in paragraph 64 and paragraph 66 of the legal act referred to in sub-paragraph 5.5 of the Requirements – for the entire period of working life of a worker and afterwards until the worker has or would

have attained the age of 75 years, but in any case not less than 30 years after termination of the work at the NF.

SECTION II
WORKPLACE MONITORING

49. For the purposes of workplace monitoring, the licence or permit holder shall choose the method of workplace monitoring and determine the frequency of monitoring, and the method and the frequency:

49.1. shall be sufficient in order to:

49.1.1. assess the radiological conditions in all workplaces;

49.1.2. assess the occupational exposure in the controlled and supervised areas;

49.1.3. review the boundaries of the controlled and supervised areas and categorisation of the premises of the controlled area;

49.2. shall be based on the dose rate, surface activity, and air activity concentration in the workplaces, and their expected fluctuations, and on the likelihood and magnitude of exposures in case of the deviations from normal operation of the NF.

50. The licence or permit holder shall select the measuring instruments and methods for workplace monitoring taking into account the radiological conditions in the workplace.

51. In the permanent workplaces, where in the work process a sudden change of radiological conditions may occur that may lead to an increase in the exposure of workers, the stationary measuring instruments with light and audible alarms warning of exceeding the prescribed levels shall be equipped and used.

52. Dismantling of the stationary measuring and / or sampling instruments intended for workplace monitoring can be performed only having assessed that the presence of thereof measures in the particular location of the NF is not expedient for the implementation of the workplace monitoring programme or having implemented alternative measures intended to ensure workplace monitoring and having coordinated the aforementioned actions with the unit or person of the licence or permit holder responsible for radiation protection.

53. The workplace monitoring programme shall contain the following:

53.1. the measured values (dose rate, surface activity, and activity concentrations);

53.2. the location (place) and frequency of measurement taking;

53.3. the measuring instruments used and methods applied;

53.4. the levels of investigation and the measures to be taken if these levels are exceeded.

54. The licence or permit holder shall ensure that the quantity and types of measuring instruments intended for workplace monitoring would meet the demand for the measuring equipment in planned and emergency exposure situations.

55. The reference measuring instruments used for the calibration of the measuring instruments used for measurements of equivalent dose rate shall be calibrated in accordance with the LST EN ISO/IEC 17025:2018 “General requirements for the competence of testing and calibration laboratories” or equivalent standard, by performing the aforementioned calibration in an accredited laboratory at least once per year.

56. The licence or permit holder shall keep records of the workplace monitoring. The records shall include date, time, location of measurement taking, measurement results, measuring instrument or method, and name of a worker who has taken a measurement or carried out testing.

SECTION III
MONITORING OF INDIVIDUAL EXPOSURE

57. The licence or permit holder shall ensure individual monitoring of all workers within the controlled area in both planned and emergency exposure situations. Monitoring of the exposure of workers who work in the controlled area under steady-state radiological conditions and whose effective dose, due to the nature of their work in the controlled area, may not exceed 1 mSv per year, may be carried out on the basis of workplace monitoring.

58. The licence or permit holder shall ensure monitoring of the exposure of workers who work in the supervised area of the NF and whose effective dose may exceed 1 mSv per year. Monitoring of the exposure of workers who work in the supervised area of the NF may be carried out on the basis of workplace monitoring.

59. The licence or permit holder shall ensure that, when conducting individual monitoring, the exposure of workers is assessed by a dosimetry service recognised in accordance with the legislation referred to in paragraph 5.4 of the Requirements.

60. The individual monitoring shall be carried out in the following manner:

60.1. by using a passive personal dosimeter for the assessment of external exposure;

60.2. by additionally using personal neutron dosimeter corresponding to the properties of ionising radiation, when the operations are carried out in neutron radiation field and the worker's effective dose, determined by neutron radiation, may exceed 3 mSv per year. When the aforementioned criterion is not exceeded, but the worker's effective dose, determined by neutron radiation, may exceed 1 mSv per year, the licence or permit holder shall assess the exposure of workers determined by neutron radiation, however, in such case the exposure of workers can be assessed on the basis of workplace monitoring or by applying the ratio of doses determined by gamma-neutron radiation assessed individually for each of the premises in which the works take place, and reviewed if the aforementioned ratio would change due to changes in the workplace;

60.3. by using a personal dosimeter intended for the measuring of the equivalent dose on extremities or the lens of the eye, if it is likely that the equivalent annual dose of the aforementioned organs may exceed 30 percent dose limit. When carrying out a monitoring of the exposure of the lens of the eye, a recognised dosimetry service may assess the equivalent dose on the lens of the eye based on the results of an personal dosimeter intended for the estimation of effective dose of worker provided that the accuracy of such assessment method applied shall at least correspond to that of the mandatory method of measuring of the equivalent dose on the lens of the eye in accordance to the requirements set out in the legislation referred to in paragraph 5.4 of the Requirements, when the dosimeter designed for the intended purpose is used;

60.4. by using an additional passive personal dosimeter for the assessment of the exposure of embryo or foetus;

60.5. by carrying out internal exposure monitoring in accordance with the procedure laid down in the legislation referred to in paragraph 5.6 of the Requirements.

61. The licence holder shall ensure that electronic personal dosimeters, capable of alerting the worker if the established exposure dose or the dose rate is exceeded, are additionally used when performing works in Category I and II controlled areas.

62. The licence holder shall ensure that personal dosimeters are worn pursuant to the following requirements:

62.1. a dosimeter intended for the estimation of effective external exposure dose shall be worn atop the individual protective equipment, in chest area;

62.2. to estimate the equivalent dose, which is obtained on lumbar area, pregnant workers shall wear an additional dosimeter under the individual protective equipment, in lumbar area;

62.3. a dosimeter intended for the assessing of external exposure of extremities shall be worn attached to the most exposed extremity;

62.4. a dosimeter intended for the assessing of external exposure of eyes shall be worn in eye level, as close as possible to the most exposed eye. This dosimeter may be worn on other body regions provided that based on dosimeter measurement results, the equivalent dose of a lens of the

eye can be estimated and the Radiation Protection Programme shall contain the justification for such use of the dosimeter.

63. When issuing an additional personal dosimeter to a worker, the licence or permit holder shall inform the worker on the procedure for wearing this dosimeter having specified the exact location where it is to be worn.

64. If the licence or permit holder suspects that due to certain reasons (e.g. a radiological incident or accident) the worker has received the external exposure dose above the established annual dose limit, the dosimeter readings shall be taken immediately, without waiting for the end of dosimeter wearing period. If, for some reason, the equivalent dose limit for the lens of the eye, skin or extremities may have been exceeded, however, the dose cannot be estimated by the results of individual exposure monitoring, the licence or permit holder shall ensure the estimation of the exposure of workers by applying calculation methods.

65. The results of the external exposure of workers shall be recorded at least once a month, giving the general information on the work (position, the works performed and other similar information), the monthly effective dose, the equivalent dose on extremities and the lens of the eye (if any), and the exposure dose estimation method. The results of the external exposure of the workers who operate in the supervised area as well as those of the workers who operate in the controlled area at constant radiological conditions and whose effective exposure dose cannot exceed 6 mSv per year due to the nature of their job in the controlled area shall be recorded once in three months.

66. When using electronic personal dosimeters, the exposure of workers shall be recorded in such a manner that, during analysis, the doses of the exposure of workers can be determined for different types of work.

67. The licence or permit holder shall make the results of individual exposure monitoring available to workers.

68. The licence or permit holder shall submit data on the exposure of workers to the State Register of Sources of Ionising Radiation and Occupational Exposure in accordance with the procedure laid down in the legislation referred to in sub-paragraph 5.7 of the Requirements.

69. External exposure of other persons and visitors shall be assessed using passive or electronic personal dosimeters. Exposure monitoring of other persons shall be carried out by issuing a personal dosimeter to each individual. To estimate the exposure of visitors, group exposure monitoring may be carried out, however, the group shall be issued with as many personal dosimeters as needed to estimate the exposure does of each visitor.

CHAPTER VIII
WORK PLANNING AND WORK PERMITS

70. The licence or permit holder shall plan works in such a way that they are carried out under the best possible radiological conditions (the lowest possible ionising radiation dose rate, surface activity and airborne activity concentrations of radionuclides) in the workplace to ensure that the workers performing the aforementioned works receive the lowest possible exposure.

71. When planning works, the following shall be taken into account:

71.1. the information on the performing of similar works;

71.2. the information on other works performed at the same or other location of the NF, which may have an impact on radiation protection during the planned works;

71.3. the need and availability of resources (workers, equipment, instruments, devices, materials, etc.);

71.4. the need for preparatory works;

71.5. the need for application of radiation protection measures;

71.6. the possibility to improve skills by using the mock-up.

72. For carrying out the work in Category I controlled area and for that during which the radiological conditions in the workplace may meet the criteria set out for Category I controlled area, the licence or permit holder shall issue a written permit (hereinafter – "the work permit")

73. The work permit shall contain the following:

73.1. the information on the dose rate distribution in the workplace, indicating the locations of increased dose rate that may affect radiation protection of workers and the prognosis on any possible dose rate change in the course of works;

73.2. the assessment of radioactive contamination (surface and airborne activity concentrations) in the workplace and the prognosis on any possible radioactive contamination change in the course of works;

73.3. the need for additional measurements in the workplaces before or during the works, specifying the radiological parameters to be measured;

73.4. the need for the use of additional personal dosimeters in the course of work;

73.5. the predicted individual and collective doses per each stage of the works;

73.6. the engineered controls and personal protective equipment for each stage of the works;

73.7. time or exposure constraints;

73.8. the situations when the unit or person responsible for radiation protection must be contacted, and contact information of such unit or person.

74. The work permit shall be issued by the person responsible for the work planning or the worker appointed by the unit responsible for radiation protection or the person responsible for radiation protection and involved in the work planning process. The work permit shall be approved in writing by the worker or person responsible for radiation protection appointed by the unit responsible for radiation protection and the person responsible for the work planning. A copy or duplicate of the work permit shall be issued to the worker responsible for the supervision of the works. The worker responsible for the supervision of the works shall ensure that the work permit accompanied by all information required to ensure radiation protection is available for workers in the course of works.

75. Before the beginning of the works, the worker of the unit responsible for radiation protection or the person responsible for radiation protection or the worker responsible for the supervision of the works shall make sure that the radiological conditions in the workplace and the radiation protection measures implemented in the workplace comply with those specified in the work permit.

76. Upon completion of the works, the work permit shall be returned to the worker who has issued the work permit. The licence or permit holder shall ensure that when accepting the returned work permit it is made sure that all works listed in the permit are completed and the workplace is arranged so that other works can be safely performed.

77. The work permits shall be registered and kept by the licence or permit holder in such a manner that the information specified therein can be accessed during the planning of other works.

CHAPTER IX
APPLICATION OF PERSONAL PROTECTIVE EQUIPMENT

SECTION I
GENERAL PROVISIONS ON THE APPLICATION OF PERSONAL PROTECTIVE EQUIPMENT

78. The licence or permit holder shall:

78.1. having taken into account the radiological conditions, provide the workers, other persons, and visitors the personal protective equipment that correspond to thereof radiological conditions;

78.2. ensure that the personal protective equipment used do not cause damage to health;

78.3. brief the workers, other persons, and visitors on proper use of the personal protective equipment;

78.4. ensure that the personal protective equipment is used in a manner to ensure radiation protection of the workers, other persons, and visitors and thereof measures are stored and maintained so that they do not lose their protective properties;

78.5. Install facilities for decontamination of the personal protective equipment.

79. When selecting the personal protective equipment, the licence or permit holder shall take into account the following:

79.1. the radiological and non-radiological hazards associated with the performance of the works;

79.2. comfort during the work;

79.3. the limitations of the personal protective equipment that may result in increased exposure or non-radiological hazards.

80. Used personal protective equipment shall be treated as potentially contaminated with radioactive materials and handled in accordance with the procedures set out by the licence or permit holder.

SECTION II
PROTECTIVE CLOTHING

81. The licence holder shall ensure that protective clothing is worn within the controlled area of the NF.

82. Protective clothing shall be worn as follows:

82.1. protective clothing that protects the skin from radioactive contamination shall be worn;

82.2. protective clothing shall be worn to prevent the spread of radioactive contamination outside the controlled area of the NF.

83. In cases where a workplace involves the risk of worker’s contact with contaminated liquids, the workers shall be provided with additional liquid-tight protective equipment (e.g. rubber gloves, rubber boots, liquid-tight protective suit).

SECTION III
RESPIRATORY PROTECTIVE EQUIPMENT

84. When in the premises where radioactive aerosols and / or non-fixed radioactive contamination may occur during the work and safe working conditions cannot be assured by application of engineered controls, respiratory protective equipment shall be used to protect the respiratory tract of workers.

85. The licence or permit holder shall ensure that:

85.1. respiratory protective equipment is selected taking into account the concentration and size of the radioactive aerosol particles in the air of the workplace;

85.2. the use of respiratory protective equipment is supervised;

85.3. respiratory protective equipment of appropriate size is used;

85.4. prior to each use, respiratory protective equipment is checked for proper functioning;

85.5. work is organised in such a manner that respiratory protective equipment is used as short as possible;

85.6. respiratory protective equipment would not cause discomfort when breathing in air;

85.7. when selecting respiratory protective equipment, priority is given to respiratory protective equipment with forced air supply and full face mask;

85.8. when selecting respiratory protective equipment, not only its filtration efficiency, but also the factors determining the worker's comfort (e.g. weight, visibility, temperature) are taken into account;

85.9. after use, respiratory protective equipment is cleaned and inspected by the workers designated and trained by the licence or permit holder;

85.10. respiratory protective equipment testing are carried out at intervals established by the licence or permit holder. When determining the frequency of testing, the type of respiratory protective equipment, the environment in which it is used and the frequency of its use shall be taken into account. Respiratory protective equipment test results shall be recorded.

CHAPTER X
OPTIMISATION OF RADIATION PROTECTION

SECTION I
GENERAL PROVISIONS ON THE OPTIMISATION OF RADIATION PROTECTION

86. The licence or permit holder shall promote and develop the application of the principle of the optimisation of radiation protection at all levels of the organisational structure and shall ensure the provision of the resources necessary for the application of this principle.

87. The licence or permit holder shall ensure that a proper organisational structure is in place for the implementation of the principle of radiation protection optimisation and for this purpose shall establish appropriate structural units (e.g. the ALARA Committee, the ALARA working group) or designate the workers responsible for the implementation of the principle of the optimisation of radiation protection in the organisation, the implementation of the measures for the optimisation of radiation protection, and the monitoring of the implementation of this principle.

SECTION II
THE PROGRAMME FOR THE OPTIMISATION OF RADIATION PROTECTION

88. The licence or permit holder shall draw up and implement the Programme for the Optimisation of Radiation Protection (hereinafter – "the ALARA programme"). The ALARA programme shall be reviewed annually and updated accordingly if any changes related to the requirements set out in paragraph 89 of the Requirements are identified or planned.

89. The ALARA programme shall contain the following:

89.1. the objectives for the optimisation of radiation protection (annual collective doses, collective doses for the performance of the works dangerous from the radiation protection point of view, occupational dose constraints as well as other radiation protection optimisation goals set by the licence or permit holder);

89.2. the organisational structure for the implementation of the principle of the optimisation of radiation protection (e.g. the ALARA Committee, the ALARA working group);

89.3. allocation of functions and responsibilities for implementing the ALARA programme;

89.4. the procedure for worker training and briefing for the purposes of the optimisation of radiation protection (e.g. training on the use and application of special equipment, devices or instruments, improvement of working skills by using the mock-up);

89.5. the list of works dangerous from the radiation protection point of view planned for the next year;

89.6. the procedure for the optimisation of radiation protection when performing the works that are dangerous from the radiation protection point of view;

89.7. the measures for the assessment of the ALARA programme effectiveness;

89.8. the corrective measures when the measures implemented under the ALARA program are found to be insufficient or the objectives set out in the ALARA program are not achieved.

SECTION III
DOSE CONSTRAINTS

90. For the purpose of radiation protection optimisation, the licence or permit holder shall apply occupational dose constraints.

91. The licence or permit holder shall establish annual occupational dose constraints and occupational dose constrains on the works dangerous from the radiation protection point of view. Occupational dose constrains shall not exceed the annual effective dose limit.

SECTION IV
THE OPTIMISATION OF RADIATION PROTECTION WHEN PERFORMING THE WORKS DANGEROUS FROM THE RADIATION PROTECTION POINT OF VIEW

92. In order to optimise radiation protection when performing the works dangerous from the radiation protection point of view, the licence or permit holder shall carry out the radiation protection optimisation analysis (hereinafter – the ALARA analysis) and ensure the implementation of the radiation protection optimisation measures identified during thereof analysis.

93. The licence or permit holder shall designate a person (e.g. the ALARA working group leader) responsible for organising the ALARA analysis and documenting thereof (hereinafter – "the ALARA analysis document").

94. The ALARA analysis document shall contain the details on the radiation protection optimisation analysis performed and the established measures for the optimisation of radiation protection. The ALARA analysis document shall be prepared in advance, before the commencement of dangerous works from the radiation protection point of view, giving the licence or permit holder time to be able to implement the measures provided for in the ALARA analysis document to ensure that radiation protection is optimised during the course of thereof works.

95. The licence or permit holder shall ensure that the workers with required competence (understanding specifics and goals of the planned work, being well aware of the conditions under which the works will be performed, being able to identify the key factors of the exposure of workers and the measures of reduction thereof, and assess their effectiveness) perform the ALARA analysis and participate in preparation of the ALARA analysis document.

96. The analysis of the works dangerous from the radiation protection point of view shall be carried out in the following order:

96.1. identification of the measures that can be used to reduce the doses of the exposure of workers;

96.2. comparison of radiation protection optimisation alternatives by applying the measures proposed by the workers, using, as far as practicable, quantitative criteria;

96.3. selection of radiation protection measures that ensure the optimisation of radiation protection.

97. Having completed the works that are dangerous from the radiation protection point of view, the analysis of the experience gained by applying the measures for the optimisation of radiation protection shall be carried out within the time limits set by the licence or permit holder in the radiation protection program. The ALARA analysis document shall be supplemented with the

information on the effectiveness of the measures taken, on the doses of workers received during the works, and on unforeseeable circumstances that had an effect on the radiation protection of workers.

98. The licence or permit holder shall ensure that the information on the optimisation of radiation protection of the works that are dangerous from the radiation protection point of view is kept and used to optimise the radiation protection of other works dangerous from the radiation protection point of view.

CHAPTER XI
WORKERS HEALTH SURVEILLANCE

99. The licence or permit holder shall arrange medical examinations of all licence or permit holder's workers operating in the NF controlled area.

100. Medical examinations of workers shall be arranged in accordance with the procedure laid down in the legislation referred to in paragraph 5.8 of the Requirements.

CHAPTER XII
TRAINING AND INSTRUCTION

101. The licence or permit holder shall ensure that all workers operating in the controlled area of the NF are trained and instructed on radiation protection matters in accordance with the procedure laid down in the legislation referred to in paragraph 5.3 of the Requirements.

102. During training or instruction, female workers shall be made aware of the dangers of ionising radiation to embryo or foetus during pregnancy and the need to inform the licence or permit holder of pregnancy.

103. The licence or permit holder shall ensure that visitors and other persons visiting the controlled area of the NF are made aware of the internal rules of procedure relevant to these persons in order to ensure radiation protection before entering the controlled area.

CHAPTER XIII
ENGINEERED CONTROLS AND OTHER PROTECTIVE MEASURES

SECTION I
GENERAL PROVISIONS ON THE ENGINEERED AND OTHER PROTECTIVE MEASURES

104. In the premises of the NF buildings, where the existing NF protection barriers or equipment cannot provide sufficient containment of radionuclides and attenuation of ionising radiation to ensure the radiation protection, the licence or permit holder shall use additional engineered controls to ensure radiation protection of workers (e.g. portable air filtration equipment, additional barriers for the attenuation of ionising radiation, the structures for the containment of radionuclides). In order to assess the adequacy of the additional engineered controls used, the effectiveness of these measures shall be monitored.

105. When planning activities such as maintenance, monitoring, inspections, modifications, decontamination, and dismantling, the potential for the spread of radioactive contamination and the effectiveness of engineered controls to mitigate this risk shall be assessed.

SECTION II
REQUIREMENTS FOR VENTILATION SYSTEMS OF THE NF

106. Mobile air filtration units shall be equipped with high-performance air particle filters. The treated air flow shall be directed to the main ventilation system of the NF.

107. Ventilation system and mobile air filtration units of the NF shall ensure the following:

107.1. lower than atmospheric air pressure inside the NF to contain the radionuclides in the NF;

107.2. air movement in the direction of the highest radioactive contamination thus creating indoor air pressure differentials;

107.3. reducing the impact of radioactive airborne materials in the air of workplaces on the health of workers through the provision of clean air to the workplaces and sufficient circulation of air at the workplaces;

107.4. the efficiency of the exhaust air treatment to such an extent that the radionuclide activity in the environment does not exceed the limit values established by the licence or permit holder in accordance with the legislation referred to in sub-paragraph 5.1 of the Requirements and is as low as reasonably achievable with regard to economic and social factors.

108. Air supply and exhaust ducts of the ventilation system of the NF shall be located as far apart as possible.

109. The licence or permit holder shall carry out maintenance, monitoring and inspections of the ventilation systems of the NF, including the portable air treatment units, in accordance with the legislation referred to in sub-paragraph 5.9 of the Requirements.

110. The licence or permit holder shall ensure that workers are immediately evacuated from the workplace in the event of failure or malfunction of the ventilation system of the NF or any components thereof. In case of replacement, shut-down or failure of the ventilation system of the NF or any components thereof, workers may only be allowed to return to the workplace after ensuring the functioning of the ventilation system of the NF or the components thereof and having made sure that the activity concentrations of radionuclides in the indoor air correspond to the criteria established in accordance with paragraph 20 of the Requirements and does not exceed other activity concentration limits, if any have been set by the licence or permit holder.

SECTION III
JOB ROTATION

111. Performing of works using job rotation approach in order to limit individual exposure of workers may only be carried out where other practical measures to reduce individual exposure of workers cannot be applied.

CHAPTER XIV
RESPONSIBILITIES OF WORKERS

112. The workers shall:

112.1. comply with the internal rules and procedures for radiation protection of workers and visitors laid down by the licence or permit holder;

112.2. properly use measuring instruments and personal protective equipment;

112.3. in accordance with the procedure established by the licence or permit holder, undergo regular medical examinations and carry out the individual exposure monitoring;

112.4. provide the licence or permit holder, as appropriate, the information on activities related to the radiation protection in the former and present workplace;

112.5. not to commit intentional acts that may infringe the requirements of these Requirements and other legislation regulating the radiation protection;

112.6. participate in radiation protection trainings and instruction organised by the licence or permit holder;

112.7. report immediately to the unit or person responsible for radiation protection any circumstances that may prejudice the radiation protection of workers, in the event such circumstances are identified.

CHAPTER XV
FINAL PROVISIONS

113. By the 1st of March of every current year, the licence or permit holder shall submit to VATESI an annual report on the implementation of the occupational exposure monitoring program of the previous year, which shall contain the summarised and analysed data on the exposure of workers and other persons who had visited the controlled area of the NF.

114. In case of exceeding the annual dose limit or in cases when due to unforeseeable circumstances the annual dose limit may be exceeded, the licence or permit holder shall notify VATESI without delay, but not later than within 1 day.

115. The licence or permit holder shall submit to VATESI for the approval the updated Occupational Exposure Control and Workplace Monitoring Program (s). VATESI shall take a decision on the approval and inform the licence or permit holder no later than 20 business days after the receipt of the documents. VATESI shall make a decision to approve the updated Occupational Exposure Control and Workplace Monitoring Program (s) if it /they comply with these Requirements.

116. The licence or permit holder shall be liable for the breach of the provisions of the Requirements as laid down by the legislation.

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Annex 1

TYPICAL CONTENT OF RADIATION PROTECTION PROGRAMME

1. Designation of responsibilities and functions to ensure radiation protection
2. Designation and management of controlled and supervised area
3. The monitoring of the exposure of workers and workplace
4. Application of personal protective equipment
5. Application of engineered controls and other protective measures
6. Work planning
7. The Programme for the Optimisation of Radiation Protection
8. Workers health surveillance
9. Training and instruction

Annex 2

LIMIT VALUES OF SURFACE ACTIVITY

	Surface activity, Bq/cm^2	
Emitter type	Surfaces of vehicles, personal items, work tools, materials, equipment, and objects	Skin and clothes
α-emitters	0.4	0.2
γ /β-emitters	4	2

Annex 3

CATEGORIES OF BUILDINGS/STRUCTURES AND PREMISES THEREOF IN THE CONTROLLED AREA OF THE NUCLEAR FACILITIES RELATED TO THE IGNALINA NUCLEAR POWER PLANT AND ITS DECOMMISSIONING

	Categorisation criteria			
Category	Dose rate, μSv/h	Radioactive contamination on surfaces by α-emitters (surface activity), $Bq \cdot cm^{-2}$	Radioactive contamination on surfaces by β-emitters (surface activity), $Bq \cdot cm^{-2}$	Airborne activity concentration, $Bq \cdot m^{-3}$
I	>56	>20	>266	>1110
II	12-56	4-20	40-266	185-1110
III	<12	<4	<40	<185