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## LIMITING OF EMISSIONS AND DISCHARGES OF RADIOACTIVE SUBSTANCES AS A FACTOR OF SAFETY AND SUSTAINABLE DEVELOPMENT

In accordance with the Resolution adopted by the UN General Assembly on September 25, 2015, the preservation of ecosystems and biodiversity in the case of national and local territorial planning is defined as one of the tasks in the field of sustainable development. The concept of sustainable development is taken into account in planning the siting of new nuclear facilities, which ensure the safe production of electricity (including nuclear fuel cycle facilities).

One of the basic principles in the methodology of the INPRO, used to assess the compliance of nuclear technologies with the sustainable development goals (hereinafter referred to as the Assessment), is that the sustainable development of nuclear energy is achieved, among other things, through the implementation of local territorial planning. At the same time, according to IAEA-TECDOC-1575, the Assessment carried out when making decisions on the siting of new nuclear facilities should include an assessment of the radiation impact, taking into account the characteristics of the selected site, in order to confirm compliance with the established dose restrictions, as prescribed by the IAEA in GSG-8 and GSG-9. However, the criteria established in the IAEA standards (including SSR-1), on the basis of which can be made a decision on the unsuitability of a site for the siting of nuclear facilities, are defined for accident conditions, but do not take into account the possible radiation impact of these facilities under normal operation conditions, which is formed mainly by radioactive discharges. The absence of such criteria in the IAEA standards, but for normal operation conditions, is possibly due to the fact that the density of the territorial location of nuclear infrastructure facilities in countries with developed energetics is currently not so high that this is an urgent problem, because limiting the possible values of the radiation impact of gaseous discharges can be achieved by increasing the efficiency of gas purification systems.

However, it is shown in [1] that implementing possible variants for the development of the nuclear fuel cycle in Russia, the growth in electricity generation and the intensity of processing of SNF is accompanied by an increase of values of radiation impact on the population and the environment due to gaseous and liquid radioactive discharges, which will lead to the need to locate nuclear infrastructure facilities that process SNF at sites that are significantly remote from each other.

The foregoing shows that the growth in the production of electricity generated by NPPs, together with the increase in SNF processing capacities, may cause the need to expand the list of criteria defined in SSR-1, on the basis of which can be made a decision on the unsuitability of a site for the siting of nuclear facilities, in order to take into account the radiation impact of the nuclear facilities under normal operation conditions.

### REFERENCES

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**Primary authors:** SHAPOVALOV, Albert (Nuclear regulatory body); Mr KURYNDIN, Anton (scientific and

Engineering Centre for Nuclear and Radiation Safety (SEC NRS)); TIMOFEEV, Nikolai

**Presenter:** TIMOFEEV, Nikolai

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