



UDC: 351/354

Dyachenko Olena Ihorivna,

a graduate student of the Dept. of Public Administration and Local Self-Government of the Dnipropetrovsk Regional Institute of Public Administration of the National Academy of Public Administration under the President of Ukraine, Counsel Division of contractual work, PJSC "DTEK Dniprooblenergo, Ukraine, 49000, Dnieper, Zaporozske highway, 22, tel.: (098) 900 20 55, e-mail: LisovaL@i.ua

ORCID: 0000-0002-5433-9523

Дяченко Олена Ігорівна,

аспірант кафедри державного управління та місцевого самоврядування Дніпропетровського регіонального інституту державного управління Національної академії державного управління при Президентові

України, юрисконсульт відділу з договірної роботи, ПАТ "ДТЕК ДНІПРООБЛЕНЕРГО", Україна, 49000, м. Дніпро, Запорізьке шосе, 22, тел.: (098) 900 20 55, e-mail: LisovaL@i.ua

ORCID: 0000-0002-5433-9523

Дяченко Елена Игоревна,

аспірант кафедри державного управління та місцевого самоврядування Дніпропетровського регіонального інституту державного управління Національної академії державного управління при Президенті України, юрисконсульт відділу з договірної роботи, ПАО "ДТЕК ДНІПРООБЛЕНЕРГО", Україна, 49000, г. Дніпр, Запорізьке шосе, 22, тел.: (098) 900 20 55, e-mail: LisovaL@i.ua

ORCID: 0000-0002-5433-9523

STATE REGULATION OF LABOUR PROTECTION OF THE PERSONNEL OF RADIATION-HAZARDOUS PRODUCTION

Abstract. The article analyzes the state regulation of occupational safety of personnel working in the field of radiation-hazardous production. The study was performed on the basis of normative-legal base of Ukraine and published documents that provide guarantees of the right personnel on safe working conditions in the workplace.

Keywords: labour protection, state regulation, nuclear and radiation safety, social security, state maintenance, the risks of radiation-hazardous production.

ДЕРЖАВНЕ РЕГУЛЮВАННЯ ОХОРОНИ ПРАЦІ ПЕРСОНАЛУ У СФЕРІ РАДІАЦІЙНО НЕБЕЗПЕЧНОГО ВИРОБНИЦТВА

Анотація. У статті аналізується державне регулювання охорони праці персоналу, який працює у сфері радіаційно небезпечного виробництва. Дослідження виконано на основі нормативно-правової бази України та опублікованих документів, які забезпечують гарантії здійснення права персоналу на безпечні умови праці на виробництві.

Ключові слова: охорона праці, державне регулювання, ядерна та радіаційна безпека, соціальні гарантії, державне забезпечення, ризики, радіаційно небезпечне виробництво.

ГОСУДАРСТВЕННОЕ РЕГУЛИРОВАНИЕ ОХРАНЫ ТРУДА ПЕРСОНАЛА В СФЕРЕ РАДИАЦИОННО ОПАСНОГО ПРОИЗВОДСТВА

Аннотация. В статье анализируется государственное регулирование охраны труда персонала, который работает в сфере радиационно опасного производства. Исследование выполнено на основе нормативно-правовой базы Украины и опубликованных документов, которые обеспечивают гарантии осуществления права персонала на безопасные условия труда на производстве.

Ключевые слова: охрана труда, государственное регулирование, ядерная и радиационная безопасность, социальные гарантии, государственное обеспечение, риски, радиационно опасное производство.

Target setting. According to the Article 3 of the Constitution of Ukraine — a man, his life and health, honor and dignity, inviolability and security are recognized in Ukraine as the highest social values. Human rights and freedoms and their guarantees determine the content and direction of the state. The state is responsible to the people for its activities. To affirm and ensure human rights and freedoms is the main duty of the state [1].

Ensuring appropriate working conditions and social protection of personnel working in radiation dangerous production is the primary task of the state to preserve the life and health of workers, establishing safe conditions in

the workplace, in order to prevent and minimize the risks of adverse effects on staff of preventive measures to prevent accidents and occupational injuries.

Analysis of the recent research and publications. The source base for the study of the problems of this issue in the field of health and safety of personnel working in radiation dangerous production serve to the legal framework of Ukraine. When writing this article we analyzed published research papers of scientists and scholars as: I. P. Krynychna, V. A. Legasov, Sh. Shayhatdynov, D. V. Zerkalov, M. V. Doroshenko, O. H. Wilson and others. Research were conducted fragmentary and are incomplete.

To analyze the current level of provision of health and safety of personnel working in hazardous radiation production, it is necessary firstly to familiarize with the concept of safety, which is enshrined in the Article 1 of the Law of Ukraine "On Labour Protection".

Thus, labour protection is a system of legal, social, economic, organizational, technical, sanitary and preventive measures and means to preserve life, health and human performance in the workplace. The law defines the provisions for the implementation of the constitutional right of workers to protection of their life and health in the workplace, the proper, safe and healthy working conditions, regulates the participation of the relevant government authorities relationship between the employer and employee safety, occupational health and production environment and establishes a uniform procedure for organizing labour protection in Ukraine [2].

The Law of Ukraine "On Compulsory State Social Insurance" according to the Basic Laws of Ukraine on compulsory social insurance, determined by the legal, financial and organizational principles of compulsory social insurance, guarantee working people for their social protection due temporary disability, maternity, accident and occupational disease, life and health [3].

The Labour Code of Ukraine regulates labour relations of workers contributing to increased productivity, improved quality of work, the efficiency of social production and the rise of the basis of the material and cultural standard of living of workers, strengthen labour discipline and the gradual transformation of the work for the be-

nefit of society as a vital need for every able-bodied man. The labour legislation establishes a high level of working conditions, in every way possible protection of labour rights [4].

But regardless, the current legislation on the regulation of health and safety of personnel working in radiation dangerous workplace often raises the question of violation of the norms of labour and social protection of the workers. The failure of the employers of the regulatory obligations enshrined lack of information-advocacy, guidance on compliance with legislation on health and safety, the lack of financing for enterprises, leads to violations of working conditions and lack of appropriate incentives for employee benefits and compensation, failure certification of working conditions of labour and other factors lead to negative consequences and threaten the life and health of employee, the layoffs.

The purpose of the article. The analysis of the state regulation of labour personnel in the field of radiation dangerous production to improve basic safety standards of their radiation protection.

The statement of basic materials. The analysis of the health and safety of personnel working in hazardous radiation production is still relevant today. After all, the state should maximize nuclear safety of Ukraine, which is provided by including workers in manufacturing in the performance of their duties by improving and modernizing legislation on labour protection, social protection, strict compliance with the established existing rules, job descriptions, and raising awareness not only of personnel working in this sphere, but also of the population in general.

The national policy on occupational safety is determined according to the Constitution of Ukraine by Verkhovna Rada of Ukraine and is aimed at creating the proper, safe and healthy working environment, prevent accidents and occupational diseases and is based on the following principles: priority of life and health of workers; the employer's full responsibility for creating appropriate, safe and healthy working conditions; improvement of industrial safety by providing continuous technical monitoring of production, technologies and products, as well as assisting enterprises in creating a safe and friendly working conditions; complex solution of problems of labour based on national, sectoral and regional programs on this issue and considering other areas of economic and social policy, advances in science and technology and environmental protection; social protection, full redress to persons who have suffered from accidents at work and occupational diseases; establishment of uniform occupational safety requirements for all enterprises and businesses, regardless of ownership and activities; adapting work processes to the capabilities of the employee considering his health and psychological condition; using economic methods of safety management, the state's participation in the financing of measures for safety, attracting voluntary contributions and other income for these purposes, the receipt of which is not against the law; public awareness, education, professional training and certification training of the workers on safety; ensuring the coordination of activities of public authorities, institutions, organizations, associations of citizens to

solve problems of health, hygiene and safety of work, as well as cooperation and consultation between the employers and employees (or their representatives) among all the social groups in decision-making on health and safety of work at the local and national levels; the use of world experience to improve conditions and increase safety through international cooperation [2].

At all the enterprises, institutions, organizations to create safe and harmless working conditions. The provision of safe working conditions rests with the owner or the authorized body. The working conditions in the workplace, safety processes, machines, equipment and other capital goods, the state of collective and individual protection used by the employee, and sanitary conditions must comply with the regulations on safety. The owner or the authorized body shall introduce modern means of safety to prevent occupational injuries and to ensure sanitary conditions to prevent the occurrence of occupational disease of the staff. The owner or the authorized body has no right to require the employee to perform work combined with the obvious danger to life and in conditions that do not comply with the legislation on labour protection. The employee has the right to refuse to work if the production creates a situation dangerous to his life or health or people around him, and the environment. In case of failure to complete elimination of unsafe and unhealthy working conditions, the owner or the authorized body shall inform the central executive body that implements the state policy in the sphere of labour, which may give temporary consent to work under such conditions. On the

owner or the authorized body relies the systematic instruction (training) of the employees on safety, fire protection. The labour groups discuss and approve comprehensive plans to improve conditions, safety and health and wellness activities, and monitor the implementation of these plans [4].

According to the Article 23 of the Law of Ukraine “On Ensuring Sanitary and Epidemiological Welfare”, the enterprises, institutions and organizations that produce, store, transport, use radioactive materials and sources of ionizing radiation, carry their disposal, destruction or utilization, must comply with the rules radiation safety, the relevant sanitary rules and standards established by other legislative acts containing requirements for radiation safety. The work with radioactive substances and other sources of ionizing radiation are carried out with the permission of the State Sanitary and Epidemiological Service and other government agencies under the Act. The cases of violations of radiation safety, sanitary rules of radioactive substances and other sources of ionizing radiation and radiation accidents are subject to mandatory investigation involving officials exercising state sanitary and epidemiological surveillance. The Article 25 of the aforementioned Law stipulates that the executive authorities, local governments, enterprises, institutions, organizations and citizens in the case of using chemicals and materials, biotechnology products are required to comply with the health standards. The production, storage, transportation, use, disposal, destruction and utilization of toxic substances, including products of biotechnology and other biological

agents are made subject to sanitary standards. These requirements also apply to transit through the territory of Ukraine of chemical, biological, radioactive and other hazardous raw materials, minerals, substances and materials (including oil and oil products, natural gas, etc.) by any means of transport and product pipelines [5].

The coordination of efforts of the states to ensure nuclear safety is primarily only in the form of the documents, most of which was developed within the IAEA (*International Atomic Energy Agency*) with other international organizations. Among them: Basic Safety Standards for Radiation Protection (approved by the IAEA, the International Labour Organization, the World Health Organization); Code of Practice on Radiation Protection Personnel of Mines and Enterprises for the Processing of Radioactive Ores (IAEA, ILO (*International Labour Organization*) and WHO (*World Health Organization*)) and others. The main purpose of nuclear safety as defined by the IAEA is the support for radiation exposure from a nuclear facility to optimally achievable low as during normal operation of the device, and in the event of an accident, as well as providing protection from ionizing radiation of individuals, their offspring and humanity in general. To explore the experience of safe operation of NPP (*nuclear power plants*) and advising public authorities of relating to radiation protection and nuclear safety, the IAEA set up a special IAEA Group to monitor the participation of which produced most of the international instruments in this field. When ensuring the radiation safety of NPP,

the focus is on the technical measures to prevent accidents. To this end, the IAEA regularly publishes a special edition — “Safety Series”, which sets out the rules, criteria and standards for the safe use of nuclear energy for peaceful purposes, to protect human health and the environment. The IAEA regularly prepares development program nuclear safety standards, which are designed for government agencies of countries-members of the IAEA, regulatory and supervisory activities on the implementation of nuclear power programs. Another important focus of the IAEA in this area is the development of the recommendations of the International Commission on Radiological Protection for principles of radiation protection standards and their practical application. The IAEA radiation protection system combines two systems of protection: general rules regarding radiation protection of an individual and protection requirements in the operation of a particular source of ionizing radiation. According to these rules the exposure of an individual to a controlled source or the result of a controlled activity shall not exceed the limits of the prescribed doses. If the radiation comes from several sources, it sets the upper limit of the dose received from separate sources. The additional protection is a system of accounting for all doses obtained from a source independent of place and time of exposure. A significant place in the sources of regulation in the field of radiation protection covers the ILO Convention No. 115 On the Protection of Workers Against Ionizing Radiations, of 1960, the Convention applies to all activities involving exposure of workers to ionizing radiations in the course of their work.

The Convention establishes a procedure for establishing maximum permissible doses of radiation and the maximum amounts of radioactive substances that can enter the body of workers. It is prohibited to prevent work related to ionizing radiation of workers younger than 16, others, if it is contrary to medical opinion. The enterprise is obliged to measure the radiation levels in the workplace, to inform workers of them and take all the measures to reduce radiation. The states are required to bring their legislation into conformity with this Convention [6].

According to the Article 13 of the Law of Ukraine “On Nuclear Energy Use and Radiation Safety”, the citizens whose health and property are damaged due to the negative impact of ionizing radiation during nuclear energy, have the right to compensation in full accordance with the law. The staff of nuclear installations, radiation sources, as well as the state inspectors on supervision of nuclear and radiation safety at nuclear installations have the right to social and economic compensation for the negative effects of ionizing radiation on their health according to the laws of Ukraine. The employees have the right to professional training, professional development and licensing by the licensee. The Article 35 of the aforementioned law establishes that the staff is the workers of the enterprises, institutions and organizations that perform work related to the operation of nuclear facilities intended for radioactive waste and other sources of ionizing radiation. The staff must strictly observe the regulations and safety standards and does not perform

any unauthorized actions that can lead to situations that violate this law. The staff of nuclear installations and facilities designed for handling radioactive waste has no right to strike; must undergo mandatory medical examinations (previous – during the employment and periodic – for employment). The persons who defined diseases mentioned in the list of medical contraindications for admission to work with sources of ionizing radiation to work in nuclear facilities and with sources of ionizing radiation are not allowed. The list of medical contraindications under which a person can not be allowed to work at nuclear facilities and sources of ionizing radiation is set by the central executive authority which provides public policy in health care [7].

Analyzing the Policy Statement on the Nuclear Regulatory Committee in ensuring the safety and security of the nuclear energy, we can distinguish that the Nuclear Regulatory Committee take active measures to support the formation and development of culture of safety and security among its employees and employees of other organizations, businesses and institutions. The Nuclear Regulatory Committee pays due attention to ensure transparency, objectivity and impartiality review of the process of regulatory decisions to that end: establishes and enforces written procedures governing all kinds of regulatory activity and interaction; creates conditions to enable licensees and other stakeholders to express their opinions, suggestions, ideas, and get clear answers on their account; welcomes the initiative of its employees, licensees and other interested parties regarding the improvement of the le-

gal framework and regulatory activities; provides access to the information about decisions taken by the regulatory procedures and adheres to appeal to the regulatory decisions by the stakeholders; ensures the implementation of a comprehensive and independent assessment of the safety and security based on modern methodologies and international best practices. Each expert of the Nuclear Regulatory Committee by example of the requirements of safety and security has a positive impact on creating a culture of safety of the licensees, pays attention to their leaders to found examples of high culture of security measures to stimulate its maintenance and further development [8].

It is urgent in the safety management system to ensure regulatory agencies occupational safety and labour protection services enterprises, institutions, organizations, qualified experts on health of different educational levels of the relevant specialized aspirations with current socio-economic conditions and real needs. The information management in the field of labour which should be carried out by the safety management at all levels needs to be improved through the study and dissemination of international and domestic experience in promoting safe methods and means of work, solving other issues in this area with the assistance of modern information technology, media, rapid spread of aids, techniques, postcards of proper direction [9].

While improving sanitation conditions of work, the important moments are the complex mechanization and automation of production processes, the use of new computer technology and information technology research and production.

The measures to reduce the occupational injuries and occupational diseases as well as improving working conditions are leading to the professional activity of workers, increase productivity and reduce losses during production. One of the most important factors in the operation of any enterprise is a correct organization of the labour, namely the proper division of responsibilities between the managers and their subordinates and the rules which were recorded in special regulations [10].

For violation of the legislation on labour protection, the failure or improper fulfillment of job duties, there are disciplinary, administrative, financial and criminal liability of the employees.

Conclusions. Thus, the first priority for improving the health of staff who works on radiation hazardous activities, should be conducted the following activities: improving state control in the sphere of labour; the analysis and modernization of existing legislation; the implementation of new standards and technologies; the compliance with dose limits of the exposure of the personnel and population established by the rules and standards on nuclear and radiation safety; increasing the qualification of the employees; carrying out research activities; the international cooperation in the sphere of radioactive waste; achieving preparedness of the personnel, where the security is a priority for every employee.

REFERENCES

1. *Constitution* of Ukraine [Electronic resource]: № 254к/96-VR of 28.06.1996 — Access mode: <http://zakon2.rada.gov.ua/laws/show/254k/96-bp>
2. *Law of Ukraine* “On Labour Protection” [Electronic resource]: № 2694-II of 14.10.1992 — Access mode: <http://zakon3.rada.gov.ua/laws/show/2694-12>
3. *Law of Ukraine* “On Compulsory State Social Insurance” [Electronic resource]: № 1105-XIV of 23.09.1999 — Access mode: <http://zakon3.rada.gov.ua/laws/show/1105-14/page>
4. *Labour Code of Ukraine* [Electronic resource]: № 322-VIII from 10.12.1971 — Access mode: <http://zakon3.rada.gov.ua/laws/show/322-08/page5>
5. *Law of Ukraine* “On Ensuring Sanitary and Epidemiological Welfare” [Electronic resource]: № 4004-XII of 24.02.1994 — Access mode: <http://zakon3.rada.gov.ua/laws/show/4004-12/page>
6. *International Law. Nuclear Safety and Radiation Protection* [Electronic resource]. — Access mode: <http://bibliograph.com.ua/mezhdunarodnoe-pravo-3/148.htm>
7. *Law of Ukraine* “On Nuclear Energy and Radiation Safety of Ukraine” [Electronic resource]: № 39/95-VR of 08.02.1995 — Access mode: <http://zakon2.rada.gov.ua/laws/show/39/95-bp>
8. *State Nuclear Regulatory Inspectorate of Ukraine. Policy Statement on Nuclear Regulatory Committee in Ensuring the Safety and Security of Nuclear Energy* [Electronic resource]. — Access mode: <http://www.snrc.gov.ua/nuclear/uk/publish/article/248319>
9. *Zerkalov D.V. Safety of Work* [Electronic resource]: Monograph / D. V. Zerkalov. — Electronic data. — K: Osnova, 2012. — 1 Electron optical disc (CD-ROM); 12 cm. — System Requirements: Pentium; 512 Mb RAM; Windows 98/2000/XP; AcrobatReader 7.0. — Access mode: <http://zerkalov.org/files/bp-m.pdf>
10. *Summary* on the topic: “Organization of Occupational Safety and Duties of Officials and Staff on Health and Safety” [Electronic resource]. — Access mode: <http://www.studfiles.ru/preview/5012893/>