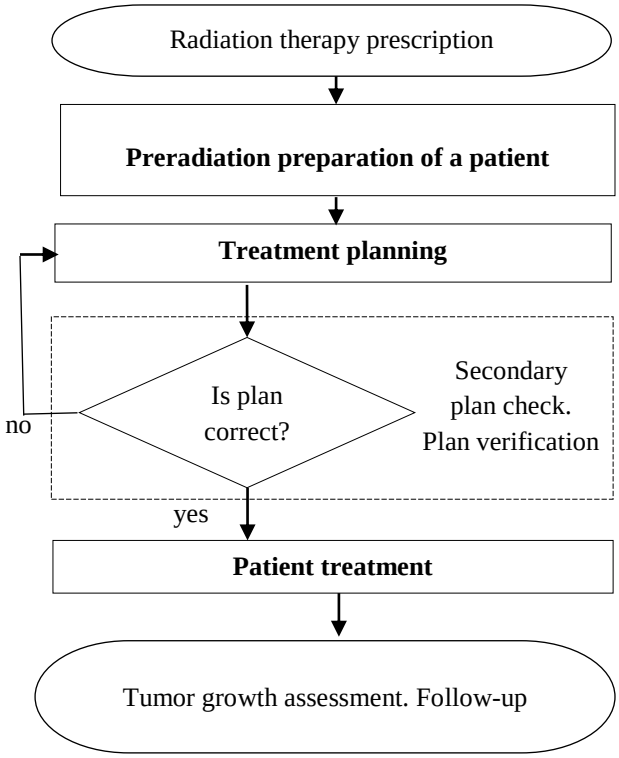

Fig. 1. – The process of radiation therapy

To prevent healthy tissues exceeding maximum permissible absorbed dose values during radiation therapy, as well as to reduce them as much as possible, the radiotherapy personnel need to choose the optimal irradiation methods at the dosimetric planning stage and correctly evaluate the dose levels delivered to the risk organs and normal tissues. With the aim of improving the quality of the treatment process, optimizing the work of the medical physicists and reducing the time of the unintended stay of the staff and the patient in the area of ionizing radiation in N.N. The Alexandrov National Cancer Center of Belarus, the authors decided to develop methodological recommendations regulating the proper choice of methods and parameters of dosimetric planning of external beam radiation therapy, describing the algorithms of the actions of a medical physicist during all stages of patient's preradiation preparation of the radiation therapy aimed at making the accurate and adequate decisions in the variety of clinical situations.

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DEVELOPMENT OF DOCUMENTATION ON WASTE MANAGEMENT FOR ENTERPRISE JSC "ECOVER PRO"

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In recent years due to the constant development of industry and the transition of the Belarusian economy to the principles of sustainable development considerable attention has been given to the issue of waste management The Republic of Belarus is constantly working on the implementation of state control over waste management. In order to comply with the legislation, each enterprise dealing with waste management is obliged to keep the relevant documentation up to date.

Keywords: legislation, waste management, waste accounting, waste inventory, waste generation standards, waste processing, rubber-containing waste.

Waste management is one of the most pressing issues. Production waste is generated in the process of activity of almost all business entities. The Republic of Belarus has a small area and does not have enough raw materials, so the economic component of this issue is extremely important for the country. One of the activities of the Government of the Republic of Belarus is the maximum involvement of waste in circulation as recyclable materials, as well as the introduction of new jobs because of reconstruction of production facilities. The main goal of the waste management system is to reduce its harmful effects on the environment, to maximize the involvement of waste in civil circulation as recyclable materials, and to create closed cycles of its collection and utilization in the country.

The recycling of secondary resources (including used tires) by grinding is currently the foremost in many countries of the world. Compared to the combustion method and chemical processing, this method is more environmentally friendly.

The study considers the activities of the enterprise JSC "Ecover PRO", namely: the production of rubber crumbs and rubber tiles. Due to the introduction of a new technological line for the production of rubber crumbs at the enterprise JSC "Ecover PRO" and the need to update the main local standard legal acts of the enterprise in the field of waste management, new documentation for the waste management has been developed for the enterprise.

In the course of the study, the normative documents of the Republic of Belarus in the field of waste management have been studied, the technological processes, equipment and production stages at the enterprise JSC "Ecover PRO", information of the generation of waste, wastewater and emissions at various technological stages, documents on waste management over the past few years have been analyzed, and an waste inventory has been carried out.

As a result of the inventory, 8 sources of waste generation and 20 types of waste, including one new type of waste, were identified. All wastes were classified in accordance with the Waste Classifier of the Republic of Belarus, the standards and annual volumes of waste generation were determined. The standards for the generation of new types of waste to be disposed of were calculated on the basis of methodological recommendations for calculating the standards for waste generation. The standards were defined for wiping material contaminated with oils (oil content is less than 15 %), brake composite pads, used oil filters.

The instruction for waste management has been developed, which sets out duties in the field of waste management, establishes the procedure of accounting of wastes, obtaining permission for the storage and disposal of waste, defines condition for storage and transportation of waste, and also the enterprises for processing waste generated at the enterprise have been identified. Based on the analysis of the Register of waste management facilities, such enterprises as JLLC "Scientifically and industrial group "Ecological Alternative", PTUE" Trading House "TroikaMarket", MHUE "Unicom" and others were selected. The waste will be transferred to the enterprise OJSC SvetlogorskKhimvolokno for disposal. An application for a permit for the disposal of waste at the Vishnevka landfill was issued.

ASSESSMENT OF SOIL POLLUTION BY VARIOUS POLLUTANTS IN THE INFLUENCE ZONE OF PETROCHEMICAL ENTERPRISES

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The assessment of chemical soil contamination level by total and mobile forms of heavy metals and polycyclic aromatic hydrocarbons (PAHs) on the site of JSC "Mogilev plant of artificial fiber" is presented.

Keywords: heavy metals (HM), soil, chemical pollution, polycyclic aromatic hydrocarbons (PAHs), maximum concentration limit (MCL), approximate permissible concentration (APC).

Nowadays the environmental aspects of industrial chemical pollution, where local soil contamination is most evident, are of particular importance.

Uncontrolled and excessive introduction of chemicals into the environment leads to a soil stability disturbance as it is a self-regulating system; to contamination of surface and ground waters, ambient air, horticulture and animal husbandry products, and, ultimately, to a negative impact on humans.

The soil samples were taken from 0-20 and 0-15 cm soil horizons using a soil auger with a strictly fixed sampling depth.

Table 1 presents soil monitoring data of the JSC "Mogilev plant of artificial fiber" site.