

nuclear reaction. It is necessary to further reduce the probability of accidents, although it is likely completely avoid them never succeed.

An effective emergency response system to various accidents and emergencies is one of the basic requirements of safe development of nuclear industry. Conducting of trainings improvement of qualification and maintenance of a high class of emergency personnel are required to achieve high efficiency of the emergency response.

The paper describes the development of an automated system of accounting training (ASAT) in dealing with emergencies in the nuclear industry. The system is based on the use of web-technologies and consists of server and client parts.

The server side consists of database and application, where all business-logic and objective model of data are realized. As an application works with the personal data of enterprises, their employees and training, the two-tier system of safety and complete audit of actions of users are realized.

Client part contains the web-interface and presents from itself one-page application for co-operating with the registration system: input and reflection of data (work both with ordinary data and with files), conduct of calendar of training, reflection of training on a map with the use of GIS-technologies. Because this web-application, access to him it maybe to get from any device, having a modern browser and access in the internet.

ASAT intended for the organization trainings and evaluation of the achieved level of effectiveness of emergency response capability after the passage of these trainings.

Automation of trainings simplify the work of planning and analysis of trainings effectiveness, as well reduce the risk of errors and duplication of information in trainings account.

The ASAT system is implemented by means of modern technologies. The developed system affects positively on the work of the users by increasing the speed of working with information about trainings, conditions of personnel and equipment of rescue units, reducing the time of formation and analysis reports.

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INVENTORY OF FLORA OBJECTS OF JSC "KERAMIN"

Inventory of flora objects is carrying out in the preparation of the making of ecological passport of the company, during the selling or corporatization of company.

The main legal act that determines carrying out of the inventory of flora objects in the Republic of Belarus is the Law of the Republic of Belarus of June 14, 2003 № 205-Z "About Flora". During the inventory of flora objects on the territory of the

company we should guide the provisions of the decree of the Ministry of Natural Resources and Environmental Protection of the Republic of Belarus of December 28, 2006 № 79 "About approval of the Instruction of the regularity of registration of flora objects located on the lands of the individual categories and their treatment", because this decree regulates the inventory of flora objects on the territories of companies.

There is no officially approved methodology for inventory of flora objects. Inventory on the enterprise JSC "Keramin"'s territory was held by the method of projections, which involves a comparison of the heights of concrete objects and tree height. Accounting journal of flora objects and maps of the location of flora objects were compiled during the inventory.

Six test plots of different sizes were taken. The total area of inventory was 6482, 6 m². The numeration of plots were from 46 to 51. Lots 46 and 47 have massive type of planting of flora objects, which means a plenty of trees growing on a large area. Lots 49, 50, 51 have line type of planting, i.e., an elongate planting of trees, usually of one species of wood. Plot 48 have a group type of planting, i.e. mix between trees and shrubs with flowerbeds.

During the inventory we have identified 209 trees, the total area occupied by trees was 13.74 m² (0.2% of the total area). In addition, we have identified 7 shrubs and 17 beds, which percentages were less than 1 too.

What about species, we have identified 14 species of trees and 5 species of shrubs. Four species of trees are widespread. They are poplar black, silver birch, horse chestnut, small-leaved lime. The total number of representatives of these species - 153, what is 73.2% of the total number of trees. Tree peony and lilac ordinary are widespread among the shrubs. We have identified 2 representatives of each species, what is 57.1% of the total number of shrubs.

What about qualitative condition of flora, researches on the territory showed that 60.52% of flora objects, 141 pcs, were in satisfactory condition (mark 4), 43 objects were in poor condition (mark 3), that is 18.45 % of the total number of flora objects. Moreover, 49 objects were in an improper condition, it is 21.03% of the total number of flora objects.

In the process of inventory, we were recording information about objects into accounting journal of flora. The plots were located close to each other, therefore, we were making a single journal for them with numeration and list of characteristics of flora objects according to the law.

Particular attention was paid to the maps of location of plots. We have developed 6 separate maps for each plot. Maps of plots were drawn in a scale of 1: 10,000 in accordance with regulatory requirements. We have used other land documents for making these maps, namely, land plans. Drawings were made using graphical editor AutoCAD.

Abstract. The inventory of flora objects on the territory of JSC "Keramin" has been carried out. Species of flora objects have been identified. The main types of plantings have been identified and schematic maps with the application of all identified flora objects have been drawn.

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COMPARATIVE ANALYSIS OF ENVIRONMENTAL POLLUTION BIOINDICATION METHODS

Nowadays environment is in a state of ecological crisis. It is closely connected with current human activity. Since the highly developed industrial society appeared man's hazardous interference into nature has increased significantly, it has become diverse and today it threatens to become a global danger for humanity. Various methods of air pollution monitoring are used, including methods based on bioindication.

Bioindication is a method of assessment of geophysical environment pollution using plants and living organisms, bioindicators. Plants are an important element of biological monitoring as they react acutely to the state of environment.

One of bioindication method is lichen indication method, which is a method of the assessment of atmosphere pollution using lichen research, and the scots pine needles bioindication method, which is a research for pine needles damage.

To conduct the following research two sample areas of the Pinsk forestry were chosen. After the identification of the lichen species of the sample area and the assessment of each species proportion of the sample total area, we made a calculation of average frequency and cover for each lichen species. We compared the lichen bioindication method research results and on the basis of relative atmosphere purity data it was found out that the atmosphere in Pinsk region (sample area № 1) ranks a bit below in its quality than sample area № 2 in the countryside (mixed forest site near Sokolovka village, Minsk region)

In the reference areas where relative atmosphere purity was assessed with the help of lichens, we evaluated the degree of damage to the scots pine needles.

After analysis of the obtained results, it can be stated with certainty that scots pines growing in the area №1 are under heavy anthropogenic pressure, which reflects on the condition of pines. In the area № 2 only 12% needles have noncritical spots, whereas in the area №1 this figure is 57, 5%, which is five times more.

Both methods deserve attention, but in our research, atmosphere state estimation based on the pine needles condition proved its worth as a more sensitive method, since the difference in the two discount areas was more distinct.

Information obtained in the result of research using these methods allows to indicate the level of atmospheric contamination. In its turn it can help us control the