

THE RADIATION MONITORING ON THE TERRITORY OF BELARUS.

Ivan I. Matveenko, Vladimir N. Pikalov, Vladimir L. Samsonov.

State Committee for Hydrometeorology
Centre of Radiation and Environment Monitoring
Minsk, Belarus.

Introduction.

On the territory of the Republic of Belarus works the points network of radiation-ecological monitoring of environmental objects by the special programs.

According to the article 40 of the Law of the Republic of Belarus "About law regime of the territory exposed to a radioactive pollution following the accident on the Chernobyl NPP" the Committee for Hydrometeorology of the MES of RB accomplishes a total estimation of radiation situation on the territory of the Republic [radiation monitoring] and a methodical guidance [see figure 1].

General part.

Air, surface water and earth monitoring within the reference observation network.

From 1963 in the Republic has been realized observations of ambient air radioactive contamination. In the presence on 54 stations every day are measured a power of the exposure gamma-radiation dose rates. The measurements in the 100 kilometres zone of NPP influence are realized every 3 hours. On 24 stations placed on all the territory of the Republic of Belarus is controlled the level of radioactive precipitation from the land atmospheric stratum [horizontal plane-tables]. In 6 cities of the Republic [Minsk, Mogilev, Gomel, Brest, Mozir, Pinsk] is daily measured the content of radioactive aerosoles in the air using filter-ventilation installation [see figure 2].

The laboratories of the Committee for Hydrometeorology realize constantly the measurements of gamma-radionuclides, strontium -90 and plutonium in precipitation and aerosole samples.

Systematical control of the radioactive surface water and ground accumulations contamination is carried out on 5 main rivers of Belarus such as Dnepr [range in Retchitsa], Sog (range in Gomel), Iput [range in Dobrush], Besed [range in Svetilovich] and Pripyat [range in Mozir] run on the contaminated territory.

From 1986 have been accomplished the radiation inspection of all the territory of Belarus including settlements, agricultural and forests areas with the participation of the Academy of Sciences, the Ministry of Agriculture, the Ministry of Forestry and other ministries and departments.

From 1992 the Committee for Hydrometeorology has been accomplished the radio-ecological earth monitoring within the reference network included 18 landscape and geochemical grounds and 181 reference sites.

CONCLUSIONS.

The observations accomplished in the period of 1990-94 showed an availability of the short-time [seasonal] risings of atmospheric air radioactiveness. Furthermore were detected the air radioactiveness rising at the expense of the dust lifting in the time of field works, it was possible the radioactiveness rising during the forest fires. But it should be noted that these risings are short-time. By the data of the Committee the short-time radioactiveness rising in the air during the forest fires doesn't influence on the whole the content of surface earth radionuclides.

For all the observed period from 1987 the excuding of caesium -137 content on the surface water of the main rivers of Belarus has not been observed. The caesium -137 taking out by surface water of the territory of Belarus has been considerably decreased in due course.

The observations showed that the intensity of radionuclides migration on vertical line was losely connected with the genetical peculiarity of the earth. The analysis of received data showed that.

Analysis of collected data shows, the most intensive migration of radionuclides are concentraded in the upper 5-8 layer.

REFERENCES.

Matveenکو, O.Jhukova, M.Germenchuk

State and prognosis of radiation situation at the territory of the Republic of Belarus.

Proceedings Belarus-Japan Symposium oct 3-5 1994. Belarus Academy of Sciences Minsk O.M.

Jhukova, I.I. Matvexenko, M.G. Germenchuk

Dinamics of radioactive pollution of atmospheric air on the territory of Belarus after the Chernoby catastrophe.

Proceedings of the second international Meeting on low-level air Radioactivity Monitoring.

Madralin 14-18 February 1994, Warsaw 1995

The Radiation Monitoring System on the territory of Belarus

