REPORT ON SÚJB RESULTS ACHIEVED IN THE SUPERVISION OF NUCLEAR FACILITY SAFETY AND RADIATION PROTECTION FOR 2006

PART II

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1. RADIATION MONITORING BY THE RADIATION MONITORING NETWORK

This part of the submitted report summarizes the results obtained in radiation monitoring within the Czech Republic for 2006 and acquired by the countrywide Radiation Monitoring Network (RMS). The report also gives brief information on RMS function and organization, and it is used as a basic document for monitoring and assessing the exposure of the public from the sources of ionizing radiation in the environment. For current monitoring results see the Internet pages www.suro.cz.

1.1. Information on RMS Function and Organization

The legal framework for radiation protection system within the Czech Republic, including radiation monitoring system within the Czech Republic, constitutes Act No. 18/1997 Coll., on the peaceful utilization of nuclear energy and ionizing radiation (hereinafter "Atomic Act") and implementing regulations related thereto. The act outlines the particulars of radiation monitoring and appoints the institutions participating therein. The radiation situation within the Czech Republic is mainly detected by means of the Radiation Monitoring Network (RMS). It is controlled by the State Office for Nuclear Safety (SÚJB). Besides SÚJB (i.e. its Regional Centres (RC) and National Radiation Protection Institute - SÚRO) and the license holders permitted to operate nuclear facilities, the organizations of the following departments participate in RMS activities: the Ministry of Finance, the Ministry of Defence, the Ministry of Interior, the Ministry of Agriculture and the Ministry of Environment. Details as to RMS function and organization are governed by Decree No. 319/2002 Coll., as amended by Decree No. 27/2006 Coll. Other requirements for ensuring the monitoring of radiation situation are stipulated in the Government Regulation No. 11/1999 Coll. (for emergency planning zone) and in the approved Monitoring Programs. Particulars of the Monitoring Programmes that, among others, determine the extent of monitoring the vicinity of nuclear facilities provided by holders of license to operate such facilities, are laid down in Decree No. 307/2002 Coll., as amended by Decree No. 499/2005 Coll.

In 2006, the following regular RMS components performed monitoring of radiation situation within the Czech Republic:

1. An Early Warning Network (SVZ) consisting of measuring point system performing round-the-clock measuring of dose equivalent rate with continuous transfer of data to the centre. A part of the network is the teledosimetric system (TDS) situated in the premises and in the vicinity of NPP so that in case of radiation emergency situation or suspicion of such situation, the escape of radionuclides to air is immediately registered and evaluated. The operation of SVZ in 2006 was ensured by departments of the SÚJB (RC and the SÚRO), the Ministry of Environment (the Czech Hydrometeorological Institute), the Ministry of Defence (the Armed Forces of the Czech Republic) and ČEZ, a.s.;
2. A Thermoluminescent Dosimetry Network (TLD), which includes the system for measuring gamma-ray dose and consists of the territorial TLD network operated by SÚJB department and local TLD networks, i.e. measuring points in the vicinity of nuclear facilities operated by ČEZ, a.s. and SÚJB department;
3. The Air Contamination Measuring Points (MMKO), which include the means for measuring dose equivalent rate, aerosol and fallout sampling as well as determination of radionuclide activities in such samples; in 2006, the operation of measuring points was

ensured by departments of the SÚJB and the Ministry of Environment (the Czech Hydrometeorological Institute), and ČEZ, a.s.;

4. The Foodstuff Contamination Measuring Points (MMKP), which include the means for sampling as well as determination of radionuclide activities in food-chain components; in 2006, the operation of these measuring points was ensured by departments of the SÚJB (RC and the SÚRO) and the Ministry of Agriculture (the State Veterinary Institute in Prague, the Czech Agricultural and Food Inspection Authority, the Central Institute for Supervising and Testing in Agriculture, the Forestry and Game Management Research Institute) and ČEZ, a.s.;
5. The Water Contamination Measuring Points (MMKV), which include the means for sampling as well as determination of radionuclide activities in water, stream-laid sediments and in selected samples of aquatics; in 2006, the operation of these measuring points was ensured by departments of the SÚJB and the Ministry of Environment (the T. G. Masaryk Water Research Institute, and the Czech Hydrometeorological Institute) and ČEZ, a.s.;
6. Measuring points at the Border Crossings (MMHP), which include the means for acquiring data on radionuclide contamination of persons, transport means, goods, objects and materials at the border crossings; in 2006, the operation of these measuring points was ensured by the Ministry of Finance department (the Customs Administration);
7. Mobile Groups (MS), which carry out monitoring of doses, dose equivalent rates and radionuclide activities in field, sampling of environmental components, and placement and replacement of dosimeters within the thermoluminescent dosimetry network; in 2006, the operation of these measuring points was ensured by departments of the SÚJB (RC and the SÚRO), the Ministry of Finance (the Customs Administration) and the Ministry of Interior (the General Directorate of Fire Rescue Service and Police of the Czech Republic) and ČEZ, a.s.;
8. Airborne groups, which carry out monitoring of large areas (measuring of dose equivalent rates; surface or specific activities of artificial or natural radionuclides), if required. Their operation is ensured by SÚJB department (SÚRO) in cooperation with the Ministry of Defence department (the Armed Forces of the Czech Republic;
9. Laboratory groups, which ensure environmental sampling and carry out spectrometric or radiochemical analyses of environmental samples. In 2006, their operation was ensured by departments of the SÚJB (RC and the SÚRO), the Ministry of Agriculture (the State Veterinary Institute, the Agricultural and Food Inspection Authority, the Forestry and Game Management Research Institute, the Central Institute for Supervising and Testing in Agriculture) and ČEZ, a.s.;
10. Central Monitoring Network Laboratory, which coordinates measurements of samples taken by the laboratory and mobile groups. The Central Laboratory controls the selected measurements of these samples and evaluates the results of the measurements, and coordinates and controls measurement of internal contamination of humans. In 2006, the operation of this laboratory was ensured by SÚJB department (the SÚRO);
11. Meteorological service, which acquires meteorological data necessary to perform evaluation and forecast of radiation situation development using the models for escaped radionuclides spreading in the air. Operation of this service is ensured by the Ministry of Environment department (the Czech Hydrometeorological Institute) on a continuous basis.

The summary of samples taken within the framework of RMS monitoring from the environment and from the food-chain components, as well as numbers of such samples for 2006 are outlined in Table No. 1a.

1.2. Monitoring of External Exposure

Monitoring of external exposure is ensured by SVZ, territorial and local TLD networks, and mobile and air groups.

1.2.1. Early Warning Network

Distribution of Early Warning Network (SVZ) measuring points within the Czech Republic is shown on Figure No. 1. The measuring points, which are equipped with pairs of sensing elements ensuring continuous measuring of photon dose equivalent rate (mean dose rate per 10 minutes) in the range from 5.10^{-8} to 10^{0} Sv/hour, transfer regularly the acquired values to the central workplace located in SÚRO. The values from 9 points situated in the measuring points of air contamination at RC SÚJB and SÚRO and from 7 measuring points situated at the workplaces of the Fire Rescue Service were transferred every 10 minutes; from 38 measuring points located in the Czech Hydrometeorological Institute observatory every hour, while this interval may be shortened to 30 minutes in emergency radiation situation. SVZ is complemented in the vicinity of Dukovany and Temelín nuclear power plants by TDS, which consists of 24 detectors in the vicinity of Temelín NPP and 27 detectors at Dukovany NPP.

The dose equivalent rate in other 16 points was detected by the Armed Forces of the Czech Republic in the form of single-shot measuring performed twice a day (Table No. 1b).

Current data from SVZ was centrally processed and continuously published on SÚRO Internet page – www.suro.cz.

For illustration, the results of all-year-round measuring of mean photon dose equivalent rates at four places (České Budějovice, Dukovany, Temelín and Churáňov) and from Dukovany NPP TDS and Temelín NPP TDS are shown on Figure Nos. 2a to 2f. The measured values show evident influence of changes in natural background at the points located in different altitudes above sea level. The variations of photon dose equivalent rate (PFDE) during seasons in lower positions are less significant. The fluctuations of natural background in the stations located in higher positions (Churáňov - Figure No. 2d) are significant in the course of the year and they must be taken into account when evaluating radiation situation.

The values of PFDE measured by SVZ in 2006 corresponded to expected natural background variations and no excess of intervention levels was recorded in any place. If there was any excess of examination level, then it was due to rain precipitations in the relevant place; in no case, the deflection was caused by change in the radiation situation (responses of SVZ detector corresponding to calibration measurements performed and responses distorted by other factors or influences – e.g. detector malfunctions, errors in data transfer, etc., but not due to change in the radiation situation in the relevant place – were eliminated after identification).

1.2.2. TLD Networks

The area monitoring of the dose equivalent from external exposure is executed by thermoluminescent dosimeters (TLD) located within the Czech Republic within the territorial TLD network and in the vicinity of Dukovany NPP and Temelín NPP complemented by local networks. The networks are comprised of 205 measuring points in total; 9 points thereof are

located within the local Temelín NPP network and 12 points are located within the local Dukovany NPP network.

The dosimeters are placed 1 meter above ground level (within the local Dukovany NPP network they are placed 3 meters above ground level), in two thirds of cases in an open area. The remaining third of dosimeters is placed in buildings so that in case of radiation emergency the efficiency of population sheltering could be assessed. The measurement is implemented in the form of integral measuring for three months; the interval is shortened, if necessary. Distribution of the measuring points of TLD networks within the country is shown on Figure No. 3.

Mean quarterly photon dose equivalent rate measured at individual measuring points of the territorial TLD network in 2006 is presented in Table No. 2.

No excess of examination levels was recorded in the year 2006. The results of measurements acquired by SVZ and territorial TLD network in the year 2006 were comparable with one another, as in previous years.

1.2.3. Mobile Groups

Monitoring of radiation situation on determined routes is ensured by Mobile Groups (MS) within the framework of TLD distribution and collection, within the framework of training performed every month by all Mobile Groups (Figure No. 4a, Table No. 2a) and within the framework of emergency exercises.

In 2006, the "Terorista 2006" exercise was held, during which the operation of MS when searching lost source was practiced (Figure No. 4b). Soil samples were also taken and analyzed during this exercise.

During monitoring performed by MS on determined routes in 2006, neither increase of dose rate, nor enhanced radioactivity was detected in any location; results of the measurement correspond to results of monitoring performed by other RMS components.

1.2.4. Airborne Groups

In 2006, the airborne group (the SÚRO in cooperation with the Armed Forces of the Czech Republic) carried out a survey of surface contamination with gamma radionuclides in the area of comparing polygon in Central Bohemia north of Vlašim (Figure No. 5).

Neither increase of dose rate above normal values of natural background nor enhanced radioactivity was detected in the area of polygon; results of the measurement correspond to results of monitoring performed by other RMS components.

1.3. Monitoring of Environmental Components

The Central Monitoring Network Laboratory, MMKO, MMKV and laboratory groups participate in monitoring of environmental components.

In 2006, the following environmental components were monitored: air (aerosols, gases, fallouts), drinking and surface waters, water treatment sludge and stream-laid sediments.

1.3.1. Air

1.3.1.1. Aerosols

Aerosol monitoring is performed at selected MMKO. The map illustrating location of the individual facilities for sampling of atmospheric aerosol is shown on Figure No. 6.

The time series of activity concentration of ^{137}Cs in aerosols taken from the air at MMKO in the year 2006 are shown on Figure Nos. 7a to 7i. The time course of monthly mean values of activity concentration in aerosols at MMKO SÚRO in Prague for the period after the accident in Chernobyl is shown on Figure No. 8a.

In 2006, there were no significant deviations in the artificial radionuclide content in the air from long-term mean values. Detected tracks of ^{137}Cs in aerosols came from the higher levels of the atmosphere and from the resuspension of the original fallout on the ground surface, and they amounted to tenths to ones of μBq/m^3. A part of the ^{137}Cs activity in the air is from the global fallout from nuclear weapon tests in the atmosphere and another part from the Chernobyl NPP accident.

Besides ^{137}Cs, ^{7}Be, which is of cosmogenic origin, and the ^{210}Pb, which is the product of the ^{222}Rn transformation, are evaluated in aerosols on a weekly basis. Figure No. 8a shows the long-term, currently very slow, decrease of the activity concentration of ^{137}Cs as well as seasonal variation of the content of ^{7}Be.

Table No. 3 shows the yearly mean values of selected radionuclide activity concentration in aerosols and current information is continuously presented on SÚRO websites (http://www.suro.cz).

In aerosols taken at MMKO SÚRO in Prague and in Hradec Králové, the activity concentration of ^{90}Sr was also determined in joint weekly samples in the quarter in question (Table No. 4), and in aerosols taken at MMKO SÚRO, the activity of ^{238}Pu and ^{239,240}Pu (Table No. 5 and Figure No. 8b).

1.3.1.2. Gases

Monitoring of ^{85}Kr has been included in the system of monitoring of the radionuclide content in the air. This artificial radioisotope gets to the air from plants for nuclear fuel reprocessing, nuclear weapon tests in the atmosphere and, in small amounts, also from discharges from nuclear power plants.

The time course of the activity concentration of ^{85}Kr in the air monitored at the measuring point in Prague in the period from 1986 up to the present is shown on Figure No. 9a. No significant changes in mean activity concentration of this radioisotope were recorded over a period of last years.

In 2001, periodic monitoring of ^{14}C in the atmosphere started. It involves the measurement of activity concentration of ^{14}C in the form of CO_2. Other possible forms of carbon in the air are not monitored since their concentrations are of lower order compared to CO_2 concentration (concentration of CH_4 and CO amounts usually to fractions of CO_2 concentration, and the values of concentration of other hydrocarbons are lower by several levels of magnitude).

Current activity of ^{14}C in the air is particularly defined by its natural production in the higher atmospheric layers due to the action of cosmic radiation. This radioisotope is also released in small amount to the air from nuclear facilities. The activity concentration of ^{14}C in the air was increased by 80% above its natural occurrence in the middle of 1960s due to nuclear weapon tests performed in the atmosphere. Since then, the activity of ^{14}C drops primarily under the

action of deposition of the carbon in the ocean sediments. Results of the measurement of ^{14}C in the form of CO_2 are shown on Figure No. 9b.

1.3.1.3. Fallouts and Precipitations

Measured values of fallouts also corroborated the fact that there were no significant deviations in the artificial radionuclide content in the air during the year 2006 (in the majority of measuring points, the values are below MVA). Slightly increased activities of ^{137}Cs in fallouts in May and in June are conforming, they repeat yearly and they are probably caused by higher dust contents in the air due to agricultural works. Likewise in aerosols, besides ^{137}Cs the ^{7}Be and ^{210}Pb are evaluated in fallouts.

The monthly time series of the surface activity of ^{137}Cs in fallouts from the individual sampling points are shown on Figure Nos. 10a to 10g. The time series of the surface activity of ^{137}Cs, ^{7}Be and ^{210}Pb determined in fallouts collected on the water surface at MMKO SÚRO in Prague, again for the period after the accident in Chernobyl, is shown on Figure No. 11a. The yearly mean values of the surface activity in the fallouts are indicated in Table No. 3.

The activity concentration of ^{3}H in precipitations collected also at MMKO SÚRO in Prague is illustrated on Figure No. 11b. Increased value of activity concentration in May 2006 did not occur during measuring in the other stations. The activity concentration of ^{3}H measured here was less than 2 Bq/l all the year round.

1.3.2. Soils, Growths

In 2006, samples of soils and growths were taken within the framework of the MS exercise and analyzed by the relevant laboratory groups (this case does not involve monitoring of time series, but practice of corresponding methodical and technical level). Results of such analyses did not prove an increased soil contamination by artificial radionuclides at any of the sampling points.

1.3.3. Drinking and Surface Waters

Activity of ^{137}Cs, ^{90}Sr and ^{3}H was monitored by water contamination monitoring point (MMKV) in the samples of drinking and surface water. Thereto, total activity concentration beta was monitored in the samples of surface water. Large sources of drinking water (Table Nos. 6a to 6c) and selected surface waters (Table Nos. 7a to 7c) were monitored in particular. The National Radiation Protection Institute in Prague, the T. G. Masaryk Water Research Institute in Prague and the Czech Hydrometeorological Institute participated in monitoring. The activity concentrations of ^{3}H in the samples from places not affected by effluents from the nuclear facilities are low and about the same. The activity concentrations of ^{137}Cs and ^{90}Sr are very low at all monitored places.

The time course of the activity concentration of ^{3}H in selected streams is shown on Figure Nos. 12a to 12c. The activity concentrations are low; slight increase of activity in the profile of the Labe River - Hřensko is probably caused by the effluents from Temelín NPP.

Within the framework of water quality monitoring, the Czech Hydrometeorological Institute detects, in addition to other indicators, total activity concentration alpha, activity concentration of ^{226}Ra, uranium concentration and activity concentration of ^{3}H. Results of such determinations are published on the website of the Czech Hydrometeorological Institute – www.chmu.cz.

1.3.4. Water Treatment Sludge, Stream-laid Sediments

Within the framework of activities of water contamination monitoring point ensured by the T. G. Masaryk Water Research Institute, the activity of ^{137}Cs (Table No. 8) was monitored in samples of stream-laid sediments and of water treatment sludge taken from places in the vicinity of large sources of drinking water. The mass activity of ^{137}Cs in the water treatment sludge is low and about the same at all sampling points.

1.4. Monitoring of Food Chains

The Monitoring Network Central Laboratory, laboratory groups and monitoring point of foodstuff contamination (MMKP) ensured by the departments of the SÚJB, the Ministry of Agriculture and the Ministry of Environment participate in monitoring of food chains.

The following samples are monitored: milk, meat, fish, game, potatoes, cereals, vegetable, fruit, honey, forest fruits, mushrooms and feedstuffs that are taken from both the distributors (from business network) and from producers. The subjects within the SÚJB department take primarily the samples at the distributors (mushrooms and cereals excepted), regardless of place of production (it is often unknown, it may be also abroad); the subjects outside the SÚJB department take primarily the samples at the producers. For this reason, the report includes separately, in addition to common results, the results of samples taken at the distributors (for the SÚJB department) and producers (outside the SÚJB department).

In 2006, the monitoring of the content of ^{90}Sr in samples of 24-hour food (the so-called mixed food) started. The composition of the samples of 24-hour food is based on the consumption basket of the Czech Republic with respect to the seasonal offer.

The annual mean values for mass activity or activity concentration of ^{137}Cs in milk, meat, fruit, vegetable, potatoes, honey, forest fruits and mushrooms for 2006 are indicated in Table Nos. 9a to 9c. The results of radiochemical determination of ^{90}Sr in the market-milk performed by SÚRO laboratories in Prague and Ostrava are presented in Table Nos. 10a and 10b.

The values of activity mass of ^{137}Cs in forest fruits, mushrooms and game against other foodstuffs are relatively higher and their decrease is very slow. Therefore, in spite of low consumption, the contribution to the total committed effective dose from ^{137}Cs ingestion is significant for an average citizen.

The results of mass activity determination of ^{137}Cs in cereals are indicated in Table Nos. 11a and 11b. The results of ^{90}Sr determination in mixed food are then presented in Table No. 12 and Table No. 13 presents the results of monitoring of selected feedstuffs.

Time courses of annual mean activity mass or concentration of ^{137}Cs in milk, beef and pork for the period from 1986 are shown on Figure No. 13; only results measured by the SÚRO are included here to maintain continuation of time series.

1.5. Monitoring of Internal Contamination

With respect to the move of the SÚRO whole-body counter to the new location, the whole-body measurements could not be performed in 2006.

As in previous years, the countrywide survey was performed to ascertain the internal contamination of ^{137}Cs through the measurement of the ^{137}Cs activity in excreted urine of persons for 24 hours. The samples were taken in May 2006 from 41 women and 32 men in total, who roughly represent the average population with their food habits.

The mean value of the ^{137}Cs activity was 0.31 Bq, and the recalculated mean content (retention) of ^{137}Cs activity in the body corresponding to it was 51 Bq.

Committed effective dose assessment based on results of the countrywide survey equals to 1.93 μSv for ^{137}Cs.

Time retention course of ^{137}Cs with the Czech population acquired by whole-body measurement of the reference group of persons and by measurement of the content of ^{137}Cs in urine since 1986 is illustrated on Figure No. 14. Interim changes in internal contamination of ^{137}Cs are almost imperceptible as it was in longer time period after nuclear weapon tests in the atmosphere.

2. MONITORING OF NUCLEAR FACILITIES

2.1. Monitoring of Radioactive Discharges from Nuclear Facilities

Radioactive discharges from Dukovany NPP and Temelín NPP to the air and water are limited by the so-called authorized limits laid down by the SÚJB in decisions on allowance of the introduction of radionuclides into the environment. The authorized limits are expressed by summing up the annual effective dose from external exposure and the committed effective dose from internal exposure for individuals from critical group of population belonging to the exposure way in question. The adherence to the limits is proven by means of computer programs approved by SÚJB, i.e. for current aerial and liquid discharges in real meteorological or hydrological conditions in the year in question.

The authorized limit for aerial discharges is determined at 40 μSv at both nuclear power plants. The authorized limit for liquid discharges is determined at 6 μSv for Dukovany NPP and 3 μSv for Temelín NPP.

The limiting conditions for the operation of the nuclear reactor at Nuclear Research Institute in Řež are expressed as maximum annual balance discharges of monitored radionuclides to the vicinity of the Nuclear Research Institute.

For aerial discharges:

Radionuclide group	**Reference radionuclide**	**Limit (Bq/year)**
Tritium	^{3}H	1.10^{14}
Noble gases	^{41}A	1.10^{15}
Radioactive iodine	^{131}I	2.10^{10}
Beta aerosols	^{137}Cs	1.10^{10}
Alfa aerosols	^{239}Pu	7.10^{6}
Carbon	^{14}C	2.10^{12}

For liquid discharges:

Radionuclide group	**Reference radionuclide**	**Limit (Bq/year)**
Tritium	^{3}H	2.10^{12}
Beta radiation sources	^{137}Cs	$2.2.10^{9}$
Alfa radiation sources with half-life period >5 years	^{239}Pu	4.10^{6}

2.1.1. Monitoring of Radioactive Discharges from Dukovany NPP

2.1.1.1. Independent Monitoring

Within the independent monitoring of aerial discharges from nuclear facilities performed by SÚJB department, the samples of air-mass were taken from the VK - 1 and VK - 2 ventilation stacks in 2006 at Dukovany NPP. The activity concentration of noble gases and ^{14}C was determined in the samples. During the sampling, the mass of air was sampled according to valid methodology to pressure vessels and measured by semiconductor gamma spectrometry at SÚRO laboratory. After longer interval the activity of ^{85}Kr was determined in taken samples in like manner used for its activity concentration in the air and ^{14}C in the form of CO_2 and in combustible forms. Results of the measurement are indicated in Table No. 14. The values from snap sampling are not contrary to measurements with monitors placed in the VK - 1 and VK - 2 ventilation stacks.

The values of activity of radionuclides emitting gamma radiation in aerosols are indicated in Table No. 15, and Table No. 16 includes activities of ^{90}Sr and transuranium radionuclides. It may be stated that independent monitoring values are not contrary to values determined by the operator.

The monthly values of activity of ^{3}H in the liquid discharges from Dukovany NPP measured by the SÚJB and compared with the results of measuring performed by the Laboratory for Monitoring of Environment Radioactivity at Dukovany NPP are shown on Figure No. 15. The weekly values of activity concentration of ^{3}H in the liquid discharges from the discharge channel measured by the SÚJB and measured by the Laboratory for Monitoring of Environment Radioactivity at Dukovany NPP are compared on Figure No. 16.

2.1.1.2. Monitoring of Discharges Performed by Dukovany NPP

According to Dukovany NPP report "D57 - Radiation situation in the vicinity of Dukovany NPP for 2006", total radioactive discharges from Dukovany NPP (determined by conservative calculation) to the air amounted to 0.395 % of annual limit expressed as maximum effective dose for individuals from the critical group of population. Activity of ^{14}C represent the most part in aerial discharges, which amounted to 0.359 % of annual limit, and noble gases less than 0.03% of annual limit. The value of the utilization of annual authorized limit calculated by the RDEDU program, which allows reflecting of the actual meteorological situation at Dukovany NPP site in 2006 and corresponding exposure ways, is provided for comparison. Such calculated value of the utilization of annual authorized limit amounted to 0.12 % in 2006.

Results of the measurement are indicated in Table No. 17.

Balance measuring of radionuclide content in liquid discharges demonstrates that 31.53 % of annual authorized limit for liquid discharges was discharged in 2006. Portion value of the utilization of annual authorized limit calculated by the RDEDU program, which allows reflecting of the actual hydrological situation in 2006 (through-flow in the Jihlava River) and corresponding exposure ways, amounted to 23.8 %. Activity of ^{3}H in discharges shares in total value with 22.3 % of annual limit.

Data of Dukovany NPP effluents to streams is indicated in Table No. 18.

2.1.2. Monitoring of Radioactive Discharges from Temelín NPP

2.1.2.1. Independent Monitoring

Within the independent monitoring there were four air-mass samplings from the internal HVB-1 ventilation stack and three air-mass samplings from the internal HVB-2 ventilation stack performed in 2006 in order to determine the activity concentration of noble gases and ^{14}C in the same manner as in case of Dukovany NPP. Results of the measurement are indicated in Table No. 19. The values of independently measured activities from snap air-mass samplings are not contrary to measuring performed by NPP.

The values of activity of radionuclides emitting gamma radiation in aerosols determined by the SÚRO are indicated in Table No. 20. Table No. 21 includes activities of ^{90}Sr and transuranium radionuclides determined in the samples taken from aerosol captures. The values of independent monitoring do not significantly differ from values determined by the operator.

The monthly values of ^{3}H activity in liquid discharges from Temelín NPP measured by the SÚJB and the results of measuring performed by the Laboratory for Monitoring of Environment Radioactivity at Temelín NPP are shown on Figure No. 17. The weekly values of ^{3}H activity concentration in the samples taken from the discharge channel measured by the SÚJB and the Laboratory for Monitoring of Environment Radioactivity at Temelín NPP are compared on Figure No. 18.

2.1.2.2. Monitoring of Discharges Performed by Temelín NPP

According to Temelín NPP Report "D 02 – Results of monitoring of discharges and radiation situation in the vicinity of Temelín NPP for 2006", total radioactivity of aerial discharges from Temelín NPP (determined by conservative calculation) amounted to 2.69 % of authorized annual limit expressed as maximum effective dose for individuals from the critical group of population. The value of the utilization of annual authorized limit calculated by the RDETE program, which reflects the actual meteorological situation at Temelín NPP site in 2006 and corresponding exposure ways, is provided for comparison. This value amounted to 0.13 % of authorized annual limit in 2006. Results of the measurement are indicated in Table No. 22.

Balance measuring of radionuclide content in the liquid discharges demonstrates that less than 51.9 % of annual authorized limit for liquid discharges was discharged in 2006. Portion value of the utilization of annual authorized limit calculated by the RDETE program, which allows reflecting of the actual hydrological situation (through-flow in the Vltava River) in 2006 and corresponding exposure ways, amounted to 13.3 %.

Summary activity values of the individual radionuclides discharged from the reservoirs at Temelín NPP to streams in 2006 are indicated in Table No. 23.

2.1.3. Monitoring of Radioactive Discharges from the Nuclear Research Institute in Řež

2.1.3.1. Independent Monitoring

In 2006, one-shot evaluation of the activity concentration of radioactive noble gases from the ventilation stack at the Nuclear Research Institute in Řež (LVR-15 reactor aerial discharges fall thereto) was performed in the same manner as at the nuclear power plant. Results are indicated in Table No. 24. The proportion of ^{41}Ar in total activity is dominant. The concentration of this radionuclide in 2006 was comparable to the year 2005 and represents about 1/10 of authorized limits (Figure No. 19a). The estimate of annual discharges of

radionuclide noble gases carried out on the basis of SÚRO measurements is in good conformity with the values provided by the Nuclear Research Institute in Řež. The content of ^{14}C in the form of CO_2 and in combustible forms is also evaluated in such samplings. The activity concentration values for 2006 are indicated in Table No. 24.

2.1.3.2. Monitoring Performed by the Nuclear Research Institute in Řež

According to data provided by the Nuclear Research Institute in Řež, activity of ^{41}Ar discharges forms the most part of the effluents to the air, which amounted to 11.3 % of annual limit in 2006. The annual activity values of noble gases in aerial discharges are shown on Figure No. 19a, and the values of ^{131}I activity are shown on Figure No. 19b.

Radioactivity of liquid discharges amounted to 0.95 % of annual authorized limit in 2006 (related to ^{137}Cs). Summary of annual activity values of radionuclides in liquid discharges (purifying station sampling) is shown on Figure No. 19c.

It is apparent from Figure Nos. 19a to 19c that the values of radionuclide activities in aerial and liquid discharges from the Nuclear Research Institute in Řež reach only a fraction of authorized limits for such discharges.

2.2. Monitoring of the Vicinity of NPP

2.2.1. Dose Equivalent from External Exposure (Local TLD Networks)

Results of independent monitoring in the local TLD networks operated by SÚJB department are indicated in Table Nos. 25 and 26.

Results of measuring in the local TLD networks operated by the Laboratory for Monitoring of Environment Radioactivity at NPP (LRKO) are presented in Table Nos. 25a and 26a.

None of the networks registered any excess of examination levels in 2006. Lower values of photon dose equivalent rate (on an average, approximately by 30%) measured by the local LRKO network in the vicinity of Dukovany NPP are related to the fact that LRKO dosimeters are installed 3m above the ground, while dosimeters of the SÚJB network are installed 1m above the ground.

2.2.2. Monitoring of Environmental and Food Chains Components in the Vicinity of NPP

Monitoring of environmental and selected food chains components in the vicinity of Dukovany and Temelín NPPs is carried out by the relevant RC SÚJB and by operators of nuclear power plants in accordance with their monitoring programs. Results of monitoring carried out by the operator of Dukovany NPP and Temelín NPP are shown on Figure Nos. 20a and 20b, and in Table Nos. 27a, 27b and 28. The time series of monitoring results of aerosols in the air in the premises and vicinity of both NPPs demonstrates that the majority of values measured in 2006 were below the minimum significant activity (MVA).

Table Nos. 27a and 27b also show separately the activity concentration of ^{3}H in surface waters affected by liquid discharges from NPP. Table No. 27a includes results of measuring of samplings from the reservoirs in Mohelno and Dalešice, and from the sampling points located thereunder, Table No. 27b - from sampling point Vltava – Hladná, Vltava – Solenice and Vltava – Kořensko (check of possible back overflow). Both tables contain also the results from streams and wells monitoring, which could be affected by infiltrations and discharges of ^{3}H from NPP.

Figure No. 21 shows the results of independent monthly monitoring of ^{3}H activity concentration performed by the SÚJB in the profiles Mohelno of the Jihlava River, or Újezd of the Vltava River affected by discharges of ^{3}H from Dukovany NPP, or Temelín NPP.

Results of the independent monitoring of ^{137}Cs surface activity performed by the SÚJB in fallouts in the vicinity of NPP are illustrated for two locations in the vicinity of Dukovany NPP on Figure No. 22 and for six locations in the vicinity of Temelín NPP on Figure No. 23. Table No. 28 indicate results of the monitoring of ^{137}Cs surface activity in the vicinity of Temelín and Dukovany NPPs by field semiconductor spectrometry carried out by the Laboratory for Monitoring of Environment Radioactivity at NPP.

Results of the independent monitoring of the NPP vicinity ensured by the SÚJB department are included in Table Nos. 29a and 29b. The values of radionuclide mass activity in elements of the food chains range from hundredths to tenths of Bq/kg, as well as values detected in territorial RMS monitoring.

Monitoring of the vicinity of Dukovany NPP and Temelín NPP proved that there are no differences between the radionuclide content in the individual environmental and in food chains components monitored in vicinity of the nuclear power plants and in other parts of the country.

Results of the monitoring performed by SÚJB department, or other departments participating in RMS activity, are in good agreement with the results of monitoring ensured by NPP operators.

2.3. Evaluation of Consequences of the Chernobyl NPP Accident

A part of the assessment of radiation situation within the Czech Republic in 2006 was the assessment of long-term consequences of the accident at Chernobyl NPP that primarily consists in monitoring of ^{137}Cs content in the air (aerosols and fallouts), in food chains components and in human body with selected groups of population.

In 2006, the content of ^{137}Cs was, as in the preceding several years, with many samples under the detectable limit.

3. FINAL EVALUATION

Based on radiation monitoring performed within the framework of the RMS as well as independent monitoring of nuclear facilities and their vicinity, it may be stated that there was no significant leaks of radionuclides to the environment registered in 2006 within the territory of the Czech Republic. No excess of determined intervention levels was recorded at any of the measuring points that could result in the necessity of any population or environment protection measures. The variations in dose rate measuring are caused by fluctuations of natural background.

There is still measurable, very low activity of ^{137}Cs contained in the environmental components, food chains and in human body that got into the environment especially after the Chernobyl accident and nuclear weapon tests in the atmosphere. Its specific activity has remained almost the same.

Discharges from Dukovany NPP remain very low. In 2006, the radionuclide content in aerial discharges was about 0.395 % of authorized annual limit; the content of ^{3}H and activation, corrosion and fission products in liquid discharges corresponded to 31.53 % of authorized

annual limit. However, the latter arises from nuclear power plant technology and it does not change significantly over years.

Total radioactivity of aerial discharges from Temelín NPP for 2006 corresponded to 2.69 % of authorized annual limit; activities of ^{3}H and activation, corrosion and fission products discharged from control tanks to streams were on the level of 51.9 % of authorized annual limit.

Activity of ^{41}Ar forms the most part of the activity of aerial discharges from the ventilation stack at the Nuclear Research Institute in Řež for 2006 - this effluent amounted to 11.3 % of total annual limit. Total activity of liquid discharges amounted to 0.95% of authorized annual limit in 2006 (related to ^{137}Cs).

There were no significant differences detected between the content of radionuclides in the individual environmental components and food chains in the vicinity of Dukovany and Temelín nuclear power plants compared to other parts of the country.

4. LIST OF ABBREVIATIONS USED IN THE REPORT

HVB	(Main Production) Unit
KŠ	Crisis Staff
LRKO	Laboratory for Monitoring of Environment Radioactivity
MDA	Minimum Detectable Activity
MMKO	Air Contamination Monitoring Point
MMKP	Foodstuff Contamination Monitoring Point
MMKV	Water Contamination Monitoring Point
MS	Mobile Group
MVA	Minimum Significant Activity
NPP	Nuclear Power Plant
PDE or PFDE	Photon Dose Equivalent Rate
RC SÚJB	Regional Centre of the State Office for Nuclear Safety
RMS	Radiation Monitoring Network
SÚJCHBO	National Institute for Nuclear, Chemical and Biological Protection
SÚJB	State Office for Nuclear Safety
SÚRO	National Radiation Protection Institute
SVÚ	State Veterinary Institute
SVZ	Early Warning System
SZPI	Agricultural and Food Inspection Authority
TDS	Teledosimetric System
TLD	Thermoluminescent Dosimetry
ÚJF AV ČR	Nuclear Physics Institute of the Academy of Science of the Czech Republic
ÚJV	Nuclear Research Institute Řež, a.s.
ÚKZÚZ	Central Institute for Supervising and Testing in Agriculture
VK	Ventilation stack
VÚLHM	Forestry and Game Management Research Institute
VÚV T.G.M.	T. G. Masaryk Water Research Institute

5. BRIEF INTERPRETATION OF MAIN TERMS, QUANTITIES AND UNITS

Radioactivity: spontaneous nuclear transformation combined with emission of ionizing radiation (natural phenomenon; property of substances, not a quantity).

Activity: number of radioactive transformation of radionuclide per unit of time.

Becquerel: SI unit for activity. One Becquerel (Bq) equals to one transformation per second (1/s). Former activity unit 1 curie (Ci) is $3.7 \cdot 10^{10}$ Bq. Mass activity is measured in Bq per kilogram (Bq/kg), activity concentration in Bq/m^3 or Bq/l, and surface activity in Bq/m^2.

Dose: amount of energy transferred to a certain substance by ionizing radiation in the volume with unit weight. Measure of effects of ionizing radiation.

Gray: SI unit for ionizing radiation dose, 1 gray (Gy) is 1 joule per kilogram (J/kg).

Exposure (irradiation): exposure to ionizing radiation. Irradiation may be either external or internal.

Exposure ways: ways, by which the radioactive substance can irradiate human being.

Dose rate: rate, with which the dose increases. It is measured in grays per second (Gy/s), per hour (Gy/h), etc.

Dose equivalent: biophysical quantity having consideration for differences in action of different types of ionizing radiation on human tissue cells. Radiation effects are higher at higher density of ionization and higher dose equivalent corresponds then to the same dose.

Sievert: SI unit for dose equivalent. It shall apply for beta, gamma and X-ray that dose equivalent of 1 Sv corresponds to dose of 1 Gy. Former unit of dose equivalent was rem (1 rem = 0.01 Sv). For alpha particles and neutrons, higher dose equivalent corresponds to dose of 1 Gy according to their energy, and that is up to 10 or 20 Sv. Similarly to dose, there is a dose equivalent rate.

Effective dose equivalent: quantity enabling assessment of exposure of the human organism in whole, although human body is exposed unevenly. It is also measured in sievert units. It respects various sensitivity of the individual organs and tissues of human body in terms of occurrence of malignancy and inheritance (the so-called stochastic effects). Annual limits of human exposure are determined in this quantity.

Collective (effective) dose equivalent: sum of the quantity in question for all population or its group. It is a measure of all-society injury to health caused by human exposure.

External exposure: human body exposure caused by external source of ionizing radiation.

Internal exposure (internal contamination): human body exposure by radionuclides received to organism by inhaled air or ingestion of foodstuff and water. Its measure is radionuclide activity entering into body, the so-called intake rate. The so-called **committed dose equivalent**, which is the dose equivalent received by human from radionuclide during its presence in the body, is derived there from. Annual limits are various for the individual radionuclides depending on size of committed dose equivalent corresponding to activity unit of received radionuclide.

Note: Symbol "E" in tables shall mean decimal base (10) in exponential function, i.e. for example, value 6E-5 shall mean 6.10^{-5}.

6. ANNEX NO. 1

Table No. 1a Types and numbers of samples analysed within the SÚJB department in the year 2006 within RMS

Table No. 1b Monthly mean values of the tissue kerma rate in the year 2006

Table No. 2 Quarterly mean values of the photon dose equivalent rate measured by territorial TLD network within the Czech Republic in the year 2006

Table No. 3 Mean activity concentration of ^{137}Cs, ^{7}Be and ^{210}Pb in aerosols in the air and mean surface activity of ^{137}Cs, ^{7}Be and ^{210}Pb in fallouts in the year 2006

Table No. 4 Activity concentration of ^{90}Sr in the air aerosol in the year 2006

Table No. 5 Activity concentration of ^{238}Pu and $^{239,\ 240}$Pu in the air aerosol in the year 2006

Table No. 6a Activity concentration of ^{3}H in selected sources of drinking water in the year 2006

Table No. 6b Activity concentration of ^{137}Cs in selected sources of drinking water in the year 2006

Table No. 6c Activity concentration of ^{90}Sr in selected sources of drinking water in the year 2006

Table No. 7a Activity concentration of ^{3}H in surface water in the year 2006

Table No. 7b Activity concentration of ^{137}Cs in surface water in the year 2006

Table No. 7c Total beta activity concentration values after deducting ^{40}K and activity concentrations of ^{90}Sr in surface water in the year 2006

Table No. 8 Mass activity values of ^{137}Cs in the water treatment sludge and stream-laid sediments in the year 2006

Table No. 9a Mass activity and activity concentration of ^{137}Cs in selected foodstuffs in the year 2006

Table No. 9b Mass activity of ^{137}Cs in selected foodstuffs in the year 2006

Table No. 9c Mass activity and activity concentration of ^{137}Cs in selected foodstuffs in the year 2006

Table No. 10a Activity concentration of ^{90}Sr in milk in the year 2006

Table No. 10b Activity concentration of ^{90}Sr in powdered milk in the year 2006

Table No. 11a Mass activity of ^{137}Cs in cereals in the year 2006

Table No. 11b Mass activity of ^{137}Cs in cereals in the year 2006

Table No. 12 Mass activity of ^{90}Sr in mixed food in the year 2006

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Table No. 15 Overview of annual total activity of gamma radionuclides in aerial discharges r from Dukovany NPP in the year 2006

Table No. 16 Activity of ^{90}Sr and transuranium elements discharged to the atmosphere from Dukovany NPP in the year 2006

Table No. 17 Overview of annual total activities of individual radionuclides in aerial discharges from Dukovany NPP in the year 2006

Table No. 18 Overview of annual total activities of individual radionuclides in liquid discharges from Dukovany NPP in the year 2006

Table No. 19 Activity concentrations of noble gases and ^{14}C from the samples taken from Temelín NPP ventilation stacks

Table No. 20 Overview of annual discharges of aerosols emitting gamma radiation to the air from Temelín NPP in the year 2006

Table No. 21 Activity concentrations of ^{90}Sr and transuranium elements discharged to the atmosphere from Temelín NPP in the year 2006

Table No. 22 Overview of annual total activities of individual radionuclides in aerial discharges from Temelín NPP in the year 2006

Table No. 23 Overview of annual total activities of individual radionuclides in liquid discharges from Temelín NPP in the year 2006

Table No. 24 Activity concentrations of noble gases and ^{14}C in aerial discharges from ÚJV Řež ventilation stack in the year 2006

Table No. 25 Quarterly mean values of the photon dose equivalent rate measured by local TLD network in the vicinity of Dukovany NPP in the year 2006

Table No. 25a Quarterly mean values of the photon dose equivalent rate measured by local TLD network in the vicinity of Dukovany NPP in the year 2006

Table No. 26 Quarterly mean values of the photon dose equivalent rate measured by local TLD network in the vicinity of Temelín NPP in the year 2006

Table No. 26a Quarterly mean values of the photon dose equivalent rate measured by local TLD network in the vicinity of Temelín NPP in the year 2006

Table No. 27a Dukovany NPP vicinity - Activity concentration, surface activity and mass activity of radionuclides in the aerosols, fallouts and in the environmental components

Table No. 27b Temelín NPP vicinity - Activity concentration, surface activity and mass activity of radionuclides in the aerosols, fallouts and in the environmental components

Table No. 28 Dukovany NPP and Temelín NPP vicinity

Table No. 29a Dukovany NPP vicinity - Activity concentration, surface activity and mass activity of radionuclides in the fallouts and in the environmental components

Table No. 29b Temelín NPP vicinity - Activity concentration, surface activity and mass activity of radionuclides in the fallouts and in the environmental components

7. ANNEX NO. 2

Figure No. 1 Early Warning System (SVZ) within Radiation Monitoring Network in the Czech Republic
Figure No. 2a SVZ České Budějovice (monitoring point at RC SÚJB)
Figure No. 2b SVZ Dukovany (monitoring point at ČHMÚ observatory)
Figure No .2c SVZ Temelín (monitoring point at ČHMÚ observatory)
Figure No. 2d SVZ Churáňov (monitoring point at ČHMÚ observatory)
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Figure No. 4a Continuous measuring of dose equivalent rate performed in course of MS monthly exercises (measuring by RC in Brno)
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Figure No. 6 Location distribution for atmospheric aerosol sampling within RMS ČR
Figure No. 7a Activity concentration of ^{137}Cs in aerosol in the air in the year 2006 – MMKO SÚRO in Prague (sampling and measuring by the SÚRO in Prague)
Figure No. 7b Activity concentration of ^{137}Cs in aerosol in the air in the year 2006 – MMKO in Ústí nad Labem (sampling by RC SÚJB in Ústí nad Labem, measuring by RC SÚJB in Ústí nad Labem and the SÚRO in Hradec Králové)
Figure No. 7c Activity concentration of ^{137}Cs in aerosol in the air in the year 2006 – MMKO Hradec Králové (sampling and measuring by RC SÚJB in Hradec Králové)
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Figure No. 7e Activity concentration of ^{137}Cs in aerosol in the air in the year 2006 – MMKO České Budějovice (sampling and measuring by RC SÚJB in České Budějovice)
Figure No. 7f Activity concentration of ^{137}Cs in aerosol in the air in the year 2006 – MMKO Plzeň (sampling by RC SÚJB in Plzeň, measuring by RC SÚJB in Plzeň and RC SÚJB in České Budějovice)
Figure No. 7g Activity concentration of ^{137}Cs in aerosol in the air in the year 2006 – MMKO Brno (sampling by RC SÚJB in Brno, measuring by RC SÚJB in České Budějovice)
Figure No. 7h Activity concentration of ^{137}Cs in aerosol in the air in the year 2006 – MMKO in Holešov (sampling by the ČHMÚ in Holešov, measuring by the SÚRO in Ostrava)
Figure No. 7i Activity concentration of ^{137}Cs in aerosol in the air in the year 2006 – MMKO in Cheb (sampling by the ČHMÚ in Cheb, measuring by the SÚRO in Prague)
Figure No. 8a Activity concentration of selected radionuclides in air aerosol, monthly mean values – MMKO SÚRO in Prague (sampling and measuring by the SÚRO in Prague)
Figure No. 8b Activity concentration of ^{90}Sr, ^{238}Pu, ^{239,240}Pu in aerial aerosol since the year 1995 (sampling and measuring by the SÚRO in Prague)
Figure No. 9a Activity concentration of ^{85}Kr in the air – MMKO in Prague

Figure No. 9b Activity concentration of ^{14}C in the air in the form of CO_2 – MMKO in Prague
Figure No. 10a Surface activity of ^{137}Cs in fallouts in the year 2006 – MMKO in Prague, fallout captured on water surface (sampling and measuring by the SÚRO in Prague)
Figure No. 10b Surface activity of ^{137}Cs in fallouts in the year 2006 – MMKO in Ústí nad Labem (sampling by RC SÚJB in Ústí nad Labem, measuring by RC SÚJB in Ústí nad Labem and the SÚRO in Hradec Králové)
Figure No. 10c Surface activity of ^{137}Cs in fallouts in the year 2006 – MMKO in Hradec Králové (sampling and measuring by RC in Hradec Králové)
Figure No. 10d Surface activity of ^{137}Cs in fallouts in the year 2006 – MMKO in Ostrava (sampling and measuring by the SÚRO in Ostrava)
Figure No. 10e Surface activity of ^{137}Cs in fallouts in the year 2006 – MMKO in České Budějovice (sampling and measuring by RC SÚJB in České Budějovice)
Figure No. 10f Surface activity of ^{137}Cs in fallouts in the year 2006 – MMKO in Plzeň (sampling by RC SÚJB in Plzeň, measuring by RC SÚJB in Plzeň and RC SÚJB in České Budějovice)
Figure No. 10g Surface activity of ^{137}Cs in fallouts in the year 2006 – MMKO in Brno (sampling by RC SÚJB in Brno, measuring by RC SÚJB in České Budějovice)
Figure No. 11a Surface activity of selected radionuclides in fallouts – MMKO SÚRO in Prague (sampling and measuring by the SÚRO in Prague)
Figure No. 11b Activity concentration of ^{3}H in precipitation (sampling and measuring by the SÚRO in Prague)
Figure No. 12a Activity concentration of ^{3}H in surface water in the year 2006 – Labe river basin – profile Hřensko (Labe) (sampling and measuring by Povodí, s.p., VÚV TGM in Prague)
Figure No. 12b Activity concentration of ^{3}H in surface water in the year 2006 – Morava river basin – profile Lanžhot (Morava) (sampling and measuring by Povodí, s.p., the VÚV TGM in Prague)
Figure No. 12c Activity concentration of ^{3}H in water in the year 2006 – Odra river basin – profile Bohumín (Odra) (sampling and measuring by Povodí, s.p., the VÚV TGM in Prague)
Figure No. 13 Annual mean values of ^{137}Cs mass activity in pork and beef and activity concentration in milk since the year 1986 (sampling and measuring by RC SÚJB and the SÚRO)
Figure No. 14 Development of ^{137}Cs content at Czech population after Chernobyl accident
Figure No. 15 Total activity of ^{3}H discharged from Dukovany NPP in the year 2006 (comparison of values measured by the SÚJB and operator's LRKO, sampling by Dukovany NPP, measuring by RC SÚJB in Brno and the LRKO at Dukovany NPP)
Figure No. 16 Activity concentration of ^{3}H in discharge channel at Dukovany NPP (comparison of values measured by the SÚJB and operator's LRKO, sampling by Dukovany NPP, measuring by RC SÚJB in Brno and the LRKO at Dukovany NPP)
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sampling by Temelín NPP, measuring by RC SÚJB in Brno and the LRKO at Temelín NPP)
Figure No. 19a Aerial discharges – balance of noble gases (^{41}Ar) activities - sampling in ventilation stack at the Nuclear Research Institute Řež in the period 1993 - 2006
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Figure No. 19c Liquid discharges sampling in purifying station at the Nuclear Research Institute Řež in the period 1993 – 2006
Figure No. 20a Activity concentration of ^{137}Cs in aerosols in samples taken at the stations in the vicinity and on the premises of Dukovany NPP (sampling and measuring by the LRKO at Dukovany NPP)
Figure No. 20b Activity concentration of ^{137}Cs in aerial aerosol in samples taken at the stations in the vicinity of Temelín NPP (sampling and measuring by the LRKO at Temelín NPP)
Figure No. 21 Activity concentration of ^{3}H in Jihlava river (profile Mohelno) and Vltava river (profile Újezd) in the year 2006 (sampling by RC SÚJB in Brno and RC SÚJB in České Budějovice, measuring by RC SÚJB in Brno)
Figure No. 22 Surface activity of ^{137}Cs in fallouts in the vicinity of Dukovany NPP in the year 2006 (sampling by RC SÚJB in Brno, measuring by RC SÚJB in České Budějovice)
Figure No. 23 Surface activity of ^{137}Cs in fallouts in the vicinity of Temelín NPP in the year 2006 (quarterly values in individual locations, sampling and measuring by RC SÚJB in České Budějovice)

Table No. 1a Types and numbers of samples analysed by the SÚJB department in the year 2006 within the RMS

Sample type	**Total number of samples per year**
Aerosols	519
Gases ($^{14}CO_2$, ^{85}Kr)	36
Fallouts	145
Soils	9 (samples taken within MS exercise)
Drinking water	164
Surface water	155
Water treatment sludge	9
Stream-laid sediment	5
Milk	94
Meat	363
Game	72
Fish	47
Potatoes	31
Cereals	32
Vegetable	35
Mixed food	20
Fruits	46
Honey	34
Forest fruits	49
Mushrooms	105
Urines	115
Persons	0
Silage	5
Fodder grass	13
Feedstuffs	19
Fodder	29

Note:
Samples analysed within the independent monitoring of nuclear facilities are not included in the number of analysed samples.

Table No. 1b Monthly mean values of the tissue kerma rate in the year 2006 (measuring by the ARMS)

Measuring point	**101**	**102**	**201**	**202**	**203**	**204**	**205**	**206**
				[μGy/h]				
January	0.13	0.12	0.11	0.14	0.14	0.11	0.13	0.12
February	0.13	0.11	0.12	0.14	0.13	0.11	0.13	0.13
March	0.13	0.13	0.12	0.14	0.13	0.12	0.13	0.13
April	0.13	0.14	0.11	0.14	N	0.12	0.14	0.13
May	0.13	0.13	0.11	0.14	N	0.12	0.14	0.15
June	0.13	0.12	0.12	0.14	N	0.12	0.14	0.14
July	0.14	0.13	0.12	0.14	N	0.12	0.13	0.16
August	0.13	0.13	0.11	0.14	0.16	0.12	0.13	0.15
September	0.13	0.14	0.12	0.14	0.16	0.13	0.13	0.15
October	0.13	0.09	0.12	0.14	0.16	0.13	0.14	0.15
November	0.13	0.12	0.12	0.14	0.17	0.13	0.14	0.15
December	0.13	0.13	0.12	0.14	0.16	0.13	0.14	0.15

Measuring point	**207**	**208**	**209**	**210**	**301**	**302**	**303**	**401**
				[μGy/h]				
January	0.14	0.11	0.12	0.14	0.16	0.15	0.07	0.14
February	0.14	0.10	0.11	0.15	0.17	0.15	0.10	0.13
March	0.15	0.11	0.11	0.15	0.16	0.15	0.10	0.14
April	0.14	0.11	0.11	0.15	0.16	0.16	0.10	0.14
May	0.14	0.11	0.12	0.15	0.16	0.16	0.10	0.14
June	0.14	0.11	0.12	0.15	0.16	0.16	0.10	0.14
July	0.15	0.11	0.11	0.15	0.16	0.16	0.10	0.14
August	0.14	0.11	0.12	0.14	0.16	0.16	0.11	0.15
September	0.15	0.11	0.12	0.15	0.16	0.15	N	0.15
October	0.15	0.12	0.13	0.15	0.16	0.16	0.10	0.14
November	0.15	0.12	0.13	0.15	0.16	0.16	0.10	0.14
December	0.15	0.12	0.13	0.15	0.17	0.16	0.10	0.14

Note:
N - not measured due to measuring instrument failure

Table No. 2 Quarterly mean values of the photon dose equivalent rate measured by territorial TLD network within the Czech Republic in the year 2006 *(measuring by the SÚRO - transport of dosimeters from/to measuring points by relevant RC SÚJB)*

Monitoring point	**I/06**	**II/06**	**III/06**	**IV/06**	**Mean value**
[nSv/hour]					
Benešov	126	124	130	127	**127**
Benešov b	113	109	114	114	**112**
Beroun	121	116	132	120	**122**
Beroun b	124	116	109	109	**114**
Blansko	104	101	95	102	**100**
Blatná	146	163	146	160	**154**
Brandýs nad Labem	87	89	90	92	**90**
Brno	109	115	131	118	**118**
Brno b	112	122	131	119	**121**
Broumov	106	121	117	117	**115**
Bruntál	80	112	98	115	**101**
Červena Voda	117	131	130	132	**127**
Červena Voda b	203	206	162	209	**195**
Česká Lípa	103	119	91	104	**104**
Česká Lípa b	118	120	128	109	**119**
České Budějovice	122	148	142	145	**139**
České Budějovice b	160	165	161	151	**159**
Český Krumlov	147	153	131		**144**
Český Krumlov b	155	161	139	154	**152**
Děčín	92	87	120	79	**95**
Dobrá Voda	112	139	135	136	**131**
Doksy	103	101	112	90	**101**
Domažlice	98	110	93	100	**100**
Domažlice b	145	148	125	127	**136**
Frýdlant nad Ostravicí	88	98	85	95	**92**
Havlíčkův Brod	111	139	119	132	**125**
Havlíčkův Brod b	146	142		153	**147**
Hodonín	68	82	83	84	**79**
Hodonín b	132	126	142	124	**131**
Hojsova Stráž	83	131	111	121	**111**
Hradec Kralové	107	108	94	103	**103**
Hradec Kralové b	117	114	95	102	**107**
Hradec Kralové-SVZ	111	108	97	97	**103**
Hranice	82	105	80	111	**94**
Humpolec	118	153	135	142	**137**
Husinec	124	119	130	121	**123**
Cheb	80	95	79	86	**85**
Chrudim	120	131	114	124	**122**

Monitoring point	I/06	II/06	III/06	IV/06	Mean value
[nSv/hour]					
Churáňov	77	138	132	139	**122**
Ivančice	101	115	113	115	**111**
Jaroměřice nad Rokytnou	121	138	154	141	**138**
Jeseník	96	93	103	98	**98**
Jeseník b	126	133	115	124	**124**
Jičín	133	141	112	134	**130**
Jihlava	77	116	119	112	**106**
Jihlava b	165	152	166	153	**159**
Jindřichův Hradec	107	142	123	134	**126**
Jindřichův Hradec b	142	149	127	144	**141**
Karlovy Vary	90	121	115	128	**113**
Karlovy Vary b *)	74	160	75	79	**97**
Kladno	138	134	134	132	**135**
Klatovy	108	114	101	102	**106**
Klatovy b	139	153	118	132	**136**
Kolín	98	98	100	98	**99**
Koryčany	97	108	110	110	**106**
Košetice	123	133	129	124	**127**
Košetice b	106	108	111	106	**108**
Kralovice	93	99	98	98	**97**
Kraslice	76	141	119	118	**113**
Kroměříž	82	97	116	97	**98**
Kutná Hora	84	80	82	87	**83**
Kutná Hora b	131	125	129	125	**128**
Liberec	123	179	143	168	**153**
Liberec b	177	185	164	173	**175**
Litoměřice	107	103	98	93	**100**
Litoměřice b	154	132	132	122	**135**
Louny	113	111	85	99	**102**
Mariánské Lázně	88	109	99	97	**99**
Mariánské Lázně b	80	99	83	86	**87**
Měděnec	82	113	96	106	**99**
Mělník	100	104	110	103	**104**
Mělník b	134	126	131	123	**128**
Mikulov	96	91	112	93	**98**
Milevsko	171	185	201	179	**184**
Milevsko b	165	149	161	137	**153**
Mladá Boleslav	101	98	97		**98**
Mladá Boleslav b	103	100	97		**100**
Mníšek pod Brdy	124	116	122	119	**120**
Most	108	115	100	109	**108**
Most b	122	114	124	113	**118**
Náchod	108	115	112	96	**108**

Monitoring point	I/06	II/06	III/06	IV/06	Mean value
[nSv/hour]					
Náchod b	107	106	89	99	**100**
Nepomuk	157	159	143	141	**150**
Nová Bystřice	116	149	139	150	**139**
Nová Říše	111	127	145	122	**126**
Nová Ves v Horách	76	120	91	111	**100**
Nové Město pod Smrkem	85	112	82	102	**95**
Nový Jičín	90	98	90	94	**93**
Nymburk	93	91	98	90	**93**
Nymburk b	126	123	122		**124**
Odry b	115	108	111	108	**111**
Olešník	126	124	132	119	**125**
Olomouc	90	97	102	103	**98**
Olomouc b	109	120	115	124	**117**
Opava	91	106	101	121	**105**
Opava b	110	110	97	111	**107**
Opočno	109	111	103	99	**106**
Osoblaha	84	120	94	125	**106**
Ostrava - Poruba Hospital	73	115	112	105	**101**
Ostrava - Syllabova	110	105	106	106	**107**
Ostrava - Syllabova b	88	122	104	119	**108**
P 1 - SÚJB - SVZ	112	106	120	106	**111**
P 1 - SÚJB b	128	125	113	123	**122**
P10 - Hostivař	138	123	143	131	**133**
P10 - SÚRO - SVZ	110	105	107	105	**107**
P10 - SÚRO b - reference	129	121	124	124	**125**
P4 - Libuš - západ	106	106	110	111	**108**
P4 - Libuš - západ b	116	110	107	109	**111**
P5 - Na Černém vrchu	122	118	113	118	**118**
P5 - Na Černém vrchu b	147	136	140	134	**139**
P6 - Ruzyně - Airport	108			114	**111**
P7 - Zoologická zahrada	110	107	110	105	**108**
P8 - Za střelnicí	127	129	133	130	**130**
P8 - Za střelnicí b	145	134	138	129	**136**
Pardubice	113	114	100	100	**107**
Pec pod Sněžkou	106	133	117	130	**121**
Pec pod Sněžkou b	152	137	115	145	**137**
Pelhřimov	167	156	169		**164**
Pelhřimov b	205	205	185	185	**195**
Písek	135	153	137	139	**141**
Písek b	159	157	155	156	**157**
Plzeň	98	95	89	90	**93**
Plzeň - SVZ	108	108	91	100	**102**
Plzeň b	123	137	108	123	**123**

Monitoring point	I/06	II/06	III/06	IV/06	Mean value
[nSv/hour]					
Prachatice	113	148	120	136	**129**
Prachatice b	141	142	134	133	**138**
Prostějov	83	112	93	107	**99**
Přerov	78	105	85	114	**95**
Příbram	122	124	130	130	**126**
Příbram b	198	183	198	187	**192**
Přimda	83	125	106	106	**105**
Přimda b	149	149	123	133	**139**
Rakovník	225	219	224	226	**224**
Rakovník b	225	189	211	208	**208**
Rychnov nad Kněžnou	111	114	103	105	**108**
Řež	108	102	115	105	**108**
Sedlčany	204	196	208	202	**202**
Semily	100	123	100	105	**107**
Soběslav	94	110	92	102	**100**
Souš	77	126	138	131	**118**
Staňkov	100	113	93	112	**104**
Staňkovice	121	131	144	134	**133**
Strakonice	124			129	**126**
Strakonice b	129	149	113	140	**133**
Strání	101	96	93	96	**97**
Stříbro	105	107	93	101	**102**
Stříbro b	137	132	114	123	**127**
Svitavy	111	126	118	110	**116**
Šluknov	98	106	95	97	**99**
Šumperk	72	107	84	114	**94**
Tábor	142	179	162	174	**164**
Tábor b	151	161	144	150	**152**
Temelín	120	135	115	128	**124**
Teplice	153	170	171	155	**162**
Trutnov	139	145	121	134	**135**
Třebíč	148	168	178	164	**164**
Třinec	88	91	86	93	**90**
Uherské Hradiště	99	101		106	**102**
Uničov	89	112	94	118	**103**
Ústí nad Labem - Habrovice	83	90	90	87	**88**
Ústí nad Labem - Habrovice b	150	144	135	140	**142**
Ústí nad Labem - Kočkov	107	120	117	103	**112**
Ústí nad Labem - Střekov	89	97	100	89	**94**
Ústí nad Orlicí	105	129	114	112	**115**
Vír	96	129	117	127	**117**
Vítkov	102	123	105	119	**112**
Vlašim	96	110	114	110	**108**

Monitoring point	I/06	II/06	III/06	IV/06	Mean value
[nSv/hour]					
Volary	107	138	134	131	**127**
Vranov nad Dyjí	84	102	95	103	**96**
Vsetín	77	107	90	103	**94**
Vyškov	94	124	112	121	**113**
Vyšší Brod	129	170	150	158	**152**
Zákřany	111	136	119	133	**125**
Zbiroh	95	113	89	98	**99**
Zbiroh b	108	117	90	104	**104**
Zlín	88	92	89	94	**91**
Zlín b	113	110	115	107	**111**
Znojmo	114	123	125	124	**122**
Znojmo b	129	125	122	116	**123**
Žatec	101	115	100	108	**106**
Žatec b	154	155	146	131	**146**
Žďár nad Sázavou	85	123	118	124	**113**
Žlutice	85	97	91	88	**90**
Žlutice b	140	135	115	141	**133**

Note:
If the result is not provided, the dosimeter was stolen or damaged in the relevant location.
Letter "b" after the name of measuring point indicates placement of the dosimeter inside the building.
Sign "*" indicates displacement of the measuring point within the location in the relevant year.

Table No. 3 Mean activity concentration of ^{137}Cs, ^{7}Be and ^{210}Pb in aerosols in the air (Bq/m^3) and mean surface activity of ^{137}Cs, ^{7}Be and ^{210}Pb in fallouts (Bq/m^2) in the year 2006 *(sampling and measuring by RC SÚJB and the SÚRO)*

Component	Mean value *)	95% tolerance interval	Number of measurements	
	(arithmetic mean)		Total	> MVA
^{137}Cs				
Aerosols	1.1E-06	3.5E-08 – 7.2E-06	467	280
Fallouts	9.3E-02	6.2E-04 – 1.0E+00	84	38
^{7}Be				
Aerosols	4.0E-03	1.1E-03 – 1.1E-02	451	451
Fallouts	8.5E+01	1.0E+00 – 8.0E+02	84	80
^{210}Pb				
Aerosols	5.1E-04	7.7E-05 – 1.9E-03	415	402
Fallouts	4.8E+00	4.7E-01 – 2.4E+01	74	49

Notes:
95% tolerance interval – interval, during which 95% of values of monitored quantity is expected.
MVA indicates the minimum significant activity for reliability level 95%.
*) The sampling point at the SÚRO in Prague was chosen to the mean values for fallouts for the location in Prague and the sampling point U nemocnice for the location of RC in České Budějovice.

Table No. 4 Activity concentration of ^{90}Sr in the air aerosol in the year 2006 *(sampling by the SÚRO in Hradec Králové and Prague, measuring by the SÚRO in Prague)*

Sampling point	Quarter	Activity [Bq/m^3]
Praha	1	<9.3E-08
	2	<3.1E-07
	3	4.4E-08
	4	<2.1E-07
Hradec Králové	1	5.8E-08
	2	<9.6E-08
	3	<4.7E-08
	4	<1.2E-07

Notes:
Activity determined from joint weekly samples in the relevant quarter.
Value after the sign "<" - minimum significant activity for reliability level 95%.

Table No. 5 Activity concentration of ^{238}Pu and $^{239, 240}Pu$ in the air aerosol in the year 2006 *(sampling and measuring by the SÚRO)*

Quarter	^{238}Pu	$^{239,240}Pu$
	Activity [Bq / m^3]	
1	< 1.2E-10	8.40E-10
2	< 1.7E-10	3.0E-09
3	< 1.3E-10	1.8E-09
4	< 1.4E-10	1.1E-09

Notes:
Activity determined from joint weekly samples in the relevant quarter.
Value after the sign "<" - minimum significant activity for reliability level 95%.

Table No. 6a Activity concentration of ^{3}H in selected sources of drinking water in the year 2006 (*sampling by the SÚRO in Prague and Povodí, s.p., measuring by the SÚRO in Prague and the VÚV TGM in Prague)*

River basin - Sampling point	Activity concentration [Bq/l]			
	1st quarter	2nd quarter	3rd quarter	4th quarter
Labe - Káraný (Jizera)	1.3	1.2	0.9	1.4
Vltava - Jesenice (Želivka)	1.4	1.0	1.2	1.1
Odra - Kružberk (Moravice)	<0.7	<0.7	1.7	1.6
Ohře - Fláje (Flájský potok)	<0.7	1.3	0.7	<0.7
Labe - Křižanovice (Chrudimka)	0.8	0.8	1.8	0.8
Morava- Vír (Svratka)	1.07	0.9	1.0	0.8
Vltava - Římov (Malše)	1.35	1.1	0.6	<0.7

Table No. 6b Activity concentration of ^{137}Cs in selected sources of drinking water in the year 2006 *(sampling by SÚRO in Prague and Povodí, s.p., measuring by the SÚRO in Prague and the VÚV TGM in Prague)*

River basin - Sampling point	Activity concentration [Bq/l]			
	1st quarter	2nd quarter	3rd quarter	4th quarter
Labe - Káraný (Jizera)	<1.9E-04	<1.9E-04	<2.3E-04	<2.0E-04
Vltava - Jesenice (Želivka)	<2.4E-04	<2.4E-04	<2.0E-04	<2.0E-04
Odra - Kružberk (Moravice)	<7.0E-04	<1.5E-03	<1.0E-03	<1.0E-03
Ohře - Fláje (Flájský potok)	9.0E-04	2.0E-03	<1.1E-03	2.1E-03
Labe - Křižanovice (Chrudimka)	<1.0E-03	<7.7E-04	<7.0E-04	<9.0E-04
Morava- Vír (Svratka)	<8.0E-04	<1.0E-03	<8.0E-04	<1.0E-03
Vltava - Římov (Malše)	8.0E-04	<8.7E-04	<5.0E-04	<8.0E-04

Table No. 6c Activity concentration of ^{90}Sr in selected sources of drinking water in the year 2006 *(sampling by the SÚRO in Prague and Povodí, s.p., measuring by the SÚRO in Prague and the VÚV TGM in Prague)*

River basin - Sampling point	Activity concentration [Bq/l]			
	1st quarter	2nd quarter	3rd quarter	4th quarter
Labe - Káraný (Jizera)	< 4.6E-03	< 7.2E-03	2.6E-03	2.6E-03
Vltava - Jesenice (Želivka)	4.6E-03	4.4E-03	3.8E-03	4.8E-03
Odra - Kružberk (Moravice)	5.9E-03	<3.2E-03	<4.5E-03	<4.4E-03
Ohře - Fláje (Flájský potok)	<3.4E-03	5.5E-03	<3.9E-03	<2.9E-03
Labe - Křižanovice (Chrudimka)	4.7E-03	2.5E-03	4.2E-03	<2.7E-03
Morava- Vír (Svratka)	6.1E-03	<3.3E-03	5.8E-03	3.8E-03
Vltava - Římov (Malše)	6.7E-03	8.2E-03	4.6E-03	3.2E-03

Table No. 7a Activity concentration of ^{3}H in surface water in the year 2006 *(sampling and measuring by Povodí, s.p., the VÚV TGM in Prague)*

River basin - Sampling point	Activity concentration [Bq/l]			
	1st quarter	2nd quarter	3rd quarter	4th quarter
Odra – Bohumín (Odra)	2.1	0.7	0.8	<0.67
Odra - Kružberk (Moravice)	<0.7	<0.7	1.0	1.1
Ohře - Fláje (Flájský potok)	1.1	1.1	1.7	<0.7
Ohře - Přísečnice (Přísečnický potok)	1.3	1.0	1.2	<0.7
Labe – Hřensko (Labe)	2.6	1.4	4.1	2.8
Labe - Křižanovice (Chrudimka)	1.1	1.2	1.8	<0.6
Morava - Moravský Svatý Ján (Morava)	1.7	<1.1	4.7	13.4
Morava - Vír (Svratka)	<0.62	0.9	0.8	1.9
Vltava - Švihov (Želivka)	<0.67	1.0	1.2	<0.6
Vltava - Římov (Malše)	1.54	1.4	2.1	0.7

Notes:
Value after the sign "<" - minimum significant activity for reliability level 95%.

Table No. 7b Activity concentration of ^{137}Cs in surface water in the year 2006 *(sampling and measuring by Povodí, s.p., the VÚV TGM in Prague)*

River basin - Sampling point	Activity concentration [Bq/l]			
	1st quarter	2nd quarter	3rd quarter	4th quarter
Odra – Bohumín (Odra)	<9.0E-04	4.3E-03	<1.0E-03	8.0E-04
Odra - Kružberk (Moravice)	<1.2E-03	<7.0E-04	<8.0E-04	<9.0E-04
Ohře - Fláje (Flájský potok)	1.6E-03	1.4E-03	1.6E-03	<1.1E-03
Ohře - Přísečnice (Přísečnický potok)	<1.0E-03	<1.6E-03	<1.0E-03	<1.2E-03
Labe – Hřensko (Labe)	1.0E-03	<1.0E-03	<7.0E-04	<1.0E-03
Labe - Křižanovice (Chrudimka)	<1.1E-03	<1.0E-03	<8.0E-04	<1.0E-03
Morava - Moravský Svatý Ján (Morava)	<1.0E-03	<8.0E-04	<1.1E-03	<1.1E-03
Morava - Vír (Svratka)	1.5E-03	1.5E-03	<1.0E-03	<1.1E-03
Vltava - Švihov (Želivka)	<8.0E-04	<1.1E-03	<1.0E-03	<7.0E-04
Vltava - Římov (Malše)	6.0E-04	9.0E-04	<1.2E-03	<1.0E-03

Notes:
Value after the sign "<" - minimum significant activity for reliability level 95%.

Table No. 7c Total beta activity concentration after deducting ^{40}K and activity concentrations of ^{90}Sr in surface water in the year 2006 *(sampling and measuring by Povodí, s.p., the VÚV TGM in Prague)*

River basin - Sampling point	Activity concentration [Bq/l]				
	Total beta - ^{40}K				^{90}Sr
	1st quarter	2nd quarter	3rd quarter	4th quarter	rok
Odra – Bohumín (Odra)	<1.4E-02	<2.5E-02	<1.4E-02	<1.1E-02	2.9E-03
Odra - Kružberk (Moravice)	<1.3E-02	<2.5E-02	<1.4E-02	<1.1E-02	<2.0E-03
Ohře - Fláje (Flájský potok)	<2.5E-02	4.2E-02	<2.5E-02	<2.5E-02	<2.4E-03
Ohře - Přísečnice (Přísečnický potok)	<2.5E-02	<2.5E-02	<2.5E-02	<2.5E-02	<3.2E-03
Labe – Hřensko (Labe)	<2.3E-02	5.1E-02	4.3E-02	5.3E-02	2.7E-03
Labe - Křižanovice (Chrudimka)	<1.0E-02	3.1E-02	3.5E-02	1.7E-02	2.7E-03
Morava - Moravský Svatý Ján (Morava)	6.3E-02	4.6E-02	5.4E-02	4.3E-02	<2.3E-03
Morava - Vír (Svratka)	5.5E-03	4.5E-02	3.6E-02	5.7E-02	<2.4E-03
Vltava - Švihov (Želivka)	<2.3E-02	<1.2E-02	<2.3E-02	<2.1E-02	3.0E-03
Vltava - Římov (Malše)	7.3E-02	1.4E-01	5.8E-02	2.0E-02	4.6E-03

Notes:
Value after the sign "<" - minimum significant activity for reliability level 95%.

Table No. 8 Mass activity of ^{137}Cs in the water treatment sludge and stream-laid sediments in the year 2006 *(sampling by Povodí, s.p., measuring by the VÚV TGM in Prague)*

River basin - profile	Water treatment sludge	Stream-laid sediment
	[Bq/kg of dry matter]	
Odra - Kružberk (Moravice)	10	29
Ohře - Fláje (Flájský potok)	40	33
Labe - Křižanovice (Chrudimka)	8	6
Morava - Vír (Svratka)	24	21
Vltava - Římov (Malše)	8	190

Table No. 9a Mass activity and activity concentration of ^{137}Cs in selected foodstuffs in the year 2006 *(sampling and measuring by RC SÚJB and the SÚRO)*

Component	Unit	Range of measured values *)	Number of measurements	
			Total	> MVA
Milk **	Bq/l	< 3.0E-03 – 3.0E-01	90	66
Beef	Bq/kg	< 4.2E-02 – 1.1E+00	98	59
Pork	Bq/kg	< 3.9E-02 – 2.9E-01	27	12
Poultry	Bq/kg	< 3.8E-02 – 1.6E-01	28	8
Other meat	Bq/kg	< 4.7E-02 – 7.5E-02	4	1
Game	Bq/kg	5.1E-01 – 3.3E+02	10	7
Fish	Bq/kg	< 7.6E-02 – 5.7E-01	10	7
Fruits	Bq/kg	< 1.0E-02 – 3.3E-01	40	8
Vegetable	Bq/kg	< 1.0E-02 – 5.6E-01	27	10
Potatoes	Bq/kg	< 1.4E-02 – 3.9E-01	27	19
Forest fruits	Bq/kg	1.9E-02 – 3.0E+02	27	13
Mushrooms	Bq/kg	< 2.4E-01 – 1.3E+03	21	20

Note:
MVA – minimum significant activity for reliability level 95%
Sign "<" – minimum significant activity for reliability level 95%
* With regard to data file properties, the range of measured values is used as data file characteristics; in the event that the file contains some values above MVA, the lowest MVA value is indicated; in the event that there was no value detected below MVA, the range of MVA values is indicated.
** Activity concentration at samples of powdered milk was estimated by means of mass activity of powdered milk and concentration factor 5 to 10.

Table No. 9b Mass activity of ^{137}Cs in selected foodstuffs in the year 2006 *(sampling by the SVÚ, the SZPI and the VÚLHM, measuring by the SVÚ)*

Component	Unit	Range of measured values *)	Number of measurements	
			Total	> MVA
Powdered milk	Bq/kg	< 5.0E-02 – 5.8E-01	4	1
Beef	Bq/kg	< 5.0E-02 – 2.4E+00	80	45
Pork	Bq/kg	< 5.0E-02 – 2.1E-01	62	15
Poultry	Bq/kg	< 5.0E-02 – 3.8E-01	52	8
Other meat	Bq/kg	< 5.0E-02 – 3.0E-01	12	5
Game	Bq/kg	< 5.0E-02 – 9.5E+01	62	25
Fish	Bq/kg	< 5.0E-02 – 1.5E+00	32	8
Honey	Bq/kg	< 5.0E-02 – 5.2E+00	34	16
Fruits	Bq/kg	< 5.0E-02 – < 5.0E-02	6	0
Vegetable	Bq/kg	< 5.0E-02 – 1.8E-01	8	2
Potatoes	Bq/kg	< 5.0E-02 – < 5.0E-02	4	0
Forest fruits	Bq/kg	1.7E+00 – 3.7E+02	22	22
Mushrooms	Bq/kg	1.0E+00 – 5.9E+03	84	78

Note:
MVA – minimum significant activity for reliability level 95%
Sign "<" – minimum significant activity for reliability level 95%
* With regard to data file properties, the range of measured values is used as data file characteristics; in the event that the file contains some values above MVA, the lowest MVA value is indicated; in the event that there was no value detected below MVA, the range of MVA values is indicated.

Table No. 9c Mass activity and activity concentration of ^{137}Cs in selected foodstuffs in the year 2006 *(sampling by RC SÚJB, the SÚRO, the SVÚ, the SZPI, the VÚLHM and the VÚV TGM, measuring by RC SÚJB, the SÚRO and the SVÚ)*

Component	Unit	95% tolerance interval	Number of measurements	
			Total	> MVA
Milk **	Bq/l	< 3.0E-03 – 3.0E-01	94	67
Beef	Bq/kg	< 4.2E-02 – 2.4E+00	178	104
Pork	Bq/kg	< 3.9E-02 – 2.9E-01	89	27
Poultry	Bq/kg	< 3.8E-02 – 3.8E-01	80	16
Other meat	Bq/kg	< 4.7E-02 – 3.0E-01	16	6
Game	Bq/kg	< 5.0E-02 – 3.3E+02	72	32
Fish	Bq/kg	< 7.6E-02 – 4.3E+00	47	20
Honey	Bq/kg	< 5.0E-02 – 5.2E+00	34	16
Fruits	Bq/kg	< 1.0E-02 – 3.3E-01	46	8
Vegetable	Bq/kg	< 1.0E-02 – 5.6E-01	35	12
Potatoes	Bq/kg	< 1.4E-02 – 3.9E-01	31	19
Forest fruits	Bq/kg	1.9E-02 – 3.7E+02	49	35
Mushrooms	Bq/kg	< 2.4E-01 – 5.9E+03	105	98

Note:
MVA – minimum significant activity for reliability level 95%
Sign "<" – minimum significant activity for reliability level 95%
* With regard to data file properties, the range of measured values is used as data file characteristics; in the event that the file contains some values above MVA, the lowest MVA value is indicated; in the event that there was no value detected below MVA, the range of MVA values is indicated.
** Activity concentration at samples of powdered milk was estimated by means of mass activity of powdered milk and concentration factor 5 to 10.

Table No. 10a Activity concentration of ^{90}Sr in milk in the year 2006 *(sampling and determination by the SÚRO in Ostrava and the SÚRO in Prague)*

Sampling point	Quarter	Activity concentration [Bq/l]
Business network - Praha	1	<2.0E-02
	2	<2.5E-02
	3	2.3E-02
	4	2.5E-02
Dairy works in Kunín	1	3.0E-02
	2	3.1E-02
	3	4.5E-02
	4	3.8E-02
Dairy works in Olomouc *)	1	1.6E-02
	2	2.0E-02
	3	2.2E-02
	4	3.3E-02
Dairy works in Valašské Meziříčí *)	1	2.8E-02
	2	3.8E-02
	3	2.6E-02
	4	4.1E-02

Note:
*) Milk samples from sampling points marked in such a way are taken from dairy works, and other from business network.

Table No. 10b Activity concentration of ^{90}Sr in powdered milk in the year 2006 *(sampling by the SÚRO and RC SÚJB, determination by the SÚRO in Ostrava)*

Sampling point (region)	Quarter	Activity concentration [Bq/l]
Diary works OLMA in Olomouc *)	1	2.8E-01
	2	3.6E-01
	3	3.8E-01
	4	3.4E-01
Region of Plzeň	1	2.1E-01
	2	2.0E-01
	3	9.7E-02
	4	2.2E-01
Region of Hradec Králové	1	3.4E-01
	2	1.9E-01
Region of Pardubice	3	1.7E-01
	4	3.8E-01
Region of Ústí	1	-
	3	4.1E-01
Region of Liberec	2	3.0E-01
	4	2.9E-01

Note:
*) Milk samples from sampling points marked in such a way are taken from dairy works, and other from business network.

Table No. 11a Mass activity of ^{137}Cs in cereals in the year 2006 *(sampling and measuring by RC SÚJB and the SÚRO)*

Product	**Activity mass [Bq/ kg]**
Barley	< 1.6E-02
Oat	6.8E-02
Wheat	< 2.6E-02
Rye	< 5.0E-02

Table No. 11b Mass activity of ^{137}Cs in cereals in the year 2006 *(sampling by the SZPI, measuring by the SVÚ)*

Component	**Activity mass [Bq/ kg]**	**Number of measurements**	
		Total	**> MVA**
Barley	< 5.0E-02	1	0
Oat	< 5.0E-02	2	0
Wheat	< 5.0E-02	1	0
Rye	< 5.0E-02 – 1.7E-01	2	1

Table No. 12 Mass activity of ^{90}Sr in mixed food in the year 2006 *(sampling by the SÚRO in Prague, or RC SÚJB, determination by the SÚRO in Prague and Ostrava)*

	Activity mass [Bq/kg]			
Sphere of RC activity	**1st quarter**	**2nd quarter**	**3rd quarter**	**4th quarter**
Ostrava	1.3E-02	2.2E-02	3.1E-02	2.1E-02
Brno	1.6E-02	3.5E-02	1.8E-02	-
Č. Budějovice	-	2.1E-02	2.0E-02	4.6E-02
Plzeň	2.1E-02	-	2.0E-02	-
Ústí n. L.	3.3E-02	-	-	3.4E-02
Hradec Králové	-	4.4E-02	-	1.9E-02
Prague	4.0E-02	5.0E-02	<9.0E-03	7.2E-02

Table No. 13 Mass activity of ^{137}Cs in feedingstuffs in the year 2006 *(sampling by the ÚKZÚZ, measuring by the SVÚ in Prague)*

Component	Range of measured values [Bq/ kg]*	Number of measurements	
		Total	> MVA
Fodder grass	< 5.0E-02 – 4.2E+00	8	5
Feedstuff	< 5.0E-02 – 2.2E-01	15	2
Fodder	< 5.0E-02 – 6.2E+01	22	17

Notes:
MVA - minimum significant activity for reliability level 95%
* With regard to data file properties, the range of measured values is used as data file characteristics; in the event that the file contains some values below MVA, the lowest MVA value is indicated; the value after the sign "<" - minimum significant activity for reliability level 95%

Table No. 14 Activity concentrations of noble gases and ^{14}C in samples taken from Dukovany NPP ventilation stacks *(sampling and measuring by the SÚRO in Prague)*

Ventilation stack		VK - 1	VK - 2
Date of sampling		9.8.2006	9.8.2006
Nuclide	Half life	[Bq/m^3]	
^{41}Ar	1.82 h	740	560
^{85}Kr	10.7 r	< 1	4.9
^{85m}Kr	4.48 h	< 30	< 20
^{87}Kr	1.27 h	< 120	< 90
^{88}Kr	2.86 h	< 20	< 20
^{131m}Xe	11.9 d	< 30	< 30
^{133}Xe	5.25 d	< 7	< 5
^{133m}Xe	2.19 d	< 7	< 6
^{135}Xe	9.10 h	41	< 3
^{14}C (combustible forms)	5730 r	32	18
^{14}C (CO_2)	5730 r	4.9	< 2

Note:
Sign "<" indicates the minimum significant activity for reliability level 95%.
The measuring was performed at SÚRO laboratory in Prague several hours after sampling so the radionuclides with short half-life periods could not be determined.
The arithmetic mean of activity concentrations determined from measurement of 2 samples is indicated for individual days.
All reactors were in normal operation.

Table No. 15 Overview of annual total activity of gamma radionuclides in aerial discharges from Dukovany NPP in the year 2006 *(sampling by the LRKO at Dukovany NPP, measuring by the SÚRO in Prague)*

Ventilation stack	**VK-1**	**VK-2**
Nuclide	**[kBq/year]**	
^{51}Cr	630	1600
^{54}Mn	640	1700
^{57}Co	7	12
^{58}Co	1000	2100
^{60}Co	2300	2800
^{59}Fe	85	320
^{65}Zn	26	34
^{75}Se	19	14
^{95}Zr	58	320
^{95}Nb	< 70	420
^{103}Ru	24	< 40
^{110m}Ag	2000	780
^{113}Sn	< 20	< 20
^{124}Sb	860	390
^{125}Sb	< 30	< 30
^{134}Cs	< 10	< 10
^{137}Cs	58	150
^{141}Ce	< 50	< 50
^{144}Ce	53	250
^{181}Hf	140	98

Notes:
Values after the sign "<" shall mean a sum of minimum significant activities (MVA) for reliability level 95%.
Numerical values were acquired as a sum of values > MVA, and in the event that the value was < MVA in any quarter, the value of ½ MVA was used as an addend.
The ¼ filter was measured at SÚRO laboratory in Prague after the expiration of the calendar quarter.

Table No. 16 Activity of ^{90}Sr and transuranium elements in aerial discharges from Dukovany NPP in the year 2006 *(sampling by the LRKO at Dukovany NPP, measuring by the SÚRO in Prague)*

Ventilation stack	**Quarter**	**Activity [Bq]**					
		^{90}Sr	**^{238}Pu**	**^{239,240}Pu**	**^{241}Am**	**^{242}Cm**	**^{243,244}Cm**
VK - 1	1	1800	400	170	390	210	760
	2	<1400	550	280	510	160	350
	Sum	>1800 <3200	950	450	900	370	1110
VK - 2	1	60 000	< 11	< 9.2	< 11	< 4.0	< 11
	2	5700	780	72	150	< 30	40
	Sum	65700	> 780 < 791	> 72 < 81.2	> 150 < 161	> 0 < 34	> 40 < 51

Table No. 17 Overview of activities of individual radionuclides discharged to the air from Dukovany NPP in the year 2006 *(taken from the Dukovany NPP report)*

	Ventilation stack 1	**Ventilation stack 2**
	Activity (activity range) [GBq, MBq, kBq]	
Noble gases [GBq]		
Total[1)]	7 130	
^{133}Xe	117	111
^{135}Xe	127	40.2
^{3}H [GBq]	274	398
^{131}I in total [MBq]	<10.8	
Gaseous form	<5.30	<5.30
^{14}C *) [GBq]	744	
Aerosols [kBq]		
^{51}Cr	>819; <1 660	>2 950; <3 720
^{54}Mn	>642; <698	>2 280; <2 290
^{59}Fe	>35.5; <233	>559; <730
^{57}Co	<84.8	<84.8
^{58}Co	>1 460; <1 530	>3 240; <3 290
^{60}Co	>2 160; <2 170	3 200
^{65}Zn	<281	<281
^{75}Se	<148	<148
^{95}Zr	>320; <486	>508; <661
^{95}Nb	>657; <742	>1 130; <1 190
^{103}Ru	>26.2; <128	<106
^{110m}Ag	>1 720; <2 110	>733; <1 110
^{124}Sb	>869; <975	>506; <603
^{134}Cs	<106	>21.0; <125
^{137}Cs	>30.1; <150	>168; <267
^{141}Ce	<148	<148
^{144}Ce	<636	<636
^{131}I	<117	<117
^{76}As	<212	<212
^{181}Hf	>225; <323	>147; <239
^{89}Sr	<12.0	<12.0
^{90}Sr	<1.32	<1.32

Note:
1) Summary value VK 1 + VK 2 (41Ar, 85Kr, 85mKr, 87Kr, 88Kr, 133Xe, 135Xe, 135mXe, 138Xe)
*) Summary value VK 1 + VK 2

Table No. 18 Overview of annual total activities of individual radionuclides in liquid discharges from Dukovany NPP in the year 2006 *(taken from the Dukovany NPP report)*

	Activity [GBq, kBq]	
	1st two-unit block	**2nd two-unit block**
^{3}H [GBq]	6 730	7 700
Other radionuclides [kBq]		
^{51}Cr	<1 440	<1 440
^{54}Mn	>2 040; <2 100	>1 500; <1 580
^{59}Fe	<288	<288
^{57}Co	<120	<120
^{58}Co	>875; <941	>707; <773
^{60}Co	>2 630; <2 700	>1 800; <1 870
^{65}Zn	<408	<408
^{75}Se	<216	<216
^{95}Zr	<288	<288
^{95}Nb	<144	<144
^{103}Ru	<144	<144
^{110m}Ag	>562; <724	<216
^{124}Sb	>77.0; <238	<168
^{134}Cs	>1 450; <1 530	>471; <549
^{137}Cs	>5 050; <5 130	>2 430; <2 480
^{141}Ce	<216	<216
^{144}Ce	<960	<960
^{131}I	<168	<168
^{89}Sr	<420	<420
^{90}Sr	<24	<24

Note:
Indicated values are summary of 12 values from monthly measurements.

Table No. 19 Activity concentrations of noble gases and ^{14}C from the samples taken from Temelín NPP ventilation stacks *(sampling by ČEZ – Temelín NPP, measuring by the SÚRO in Prague)*

Internal ventilation stack		**HVB - 1**				**HVB - 2**		
Date of sampling		**29.3.2006**	**31.5.2006**	**25.9.2006**	**5.12.2006**	**29.3.2006**	**31.5.2006**	**5.12.2006**
Nuclide	**Half life**	**[Bq/m^3]**						
^{41}Ar	1.82 h	750	710	1 400	1 000	690	530	1 000
^{85}Kr	10.7 r	15	23	215		8.6	7.3	
^{85m}Kr	4.48 h	< 30	21	< 140	< 50	95	35	< 50
^{87}Kr	1.27 h	< 140	< 50	< 1 000	< 90	< 140	< 35	< 90
^{88}Kr	2.86 h	< 50	< 20	< 140	< 50	< 50	58	< 20
^{131m}Xe	11.9 d	< 50	< 30	< 90	< 100	< 20	< 30	< 100
^{133}Xe	5.25 d	210	350	< 600	< 500	780	290	< 400
^{133m}Xe	2.19 d	< 10	9	18	29	28	11	< 10
^{135}Xe	9.10 h	140	140	580	530	530	130	160
^{14}C*	5730 r	73	90	53		24	35	62
^{14}C**	5730 r	73	4.8	7		< 1	< 1	3.3

Note:
Sign "<" indicates the minimum significant activity for reliability level 95%.
The measuring was performed at SÚRO laboratory in Prague several hours after sampling so the radionuclides with short half-life periods could not be determined.
The arithmetic mean of activity concentrations determined from measurement of 2 samples is indicated for individual days
The monitored reactors were in normal operation at sampling time.
* Combustible forms
** CO_2

Table No. 20 Overview of annual total activity of gamma radionuclides in aerial discharges from Temelín NPP in the year 2006 *(sampling by the LRKO at Temelín NPP, measuring by the SÚRO in Prague)*

Ventilation stack	**Internal HVB-1**	**External HVB-1**	**Internal HVB-2**	**External HVB-2**	**BAPP**
Nuclide	**[kBq/r]**				
^{51}Cr	< 70	< 200	< 60	270	< 200
^{54}Mn	2	18	2	20	93
^{57}Co	< 1	< 1	< 1	< 1	< 4
^{58}Co	< 3	31	4	150	88
^{60}Co	< 2	12	< 1	23	66
^{59}Fe	6	< 20	< 9	< 10	47
^{65}Zn	< 4	< 5	< 4	< 6	8
^{75}Se	< 2	< 2	< 2	5	6
^{95}Zr	< 7	49	< 6	100	230
^{95}Nb	< 9	370	< 7	390	590
^{103}Ru	< 5	< 9	< 5	43	26
^{110m}Ag	94	71	82	250	200
^{113}Sn	9	< 3	< 3	< 3	20
^{124}Sb	21	< 6	< 4	210	400
^{125}Sb	11	21	6	80	310
^{134}Cs	3	12	24	110	17
^{137}Cs	4	17	19	100	32
^{141}Ce	< 8	< 20	< 8	50	< 40
^{144}Ce	< 9	< 8	< 8	80	< 40
^{181}Hf	< 8	< 9	< 9	< 8	< 30

Note:
Values after the sign "<" shall mean a sum of minimum significant activities (MVA) for reliability level 95%.
Numerical values were acquired as a sum of values > MVA, and in the event that the value was < MVA in any quarter, the value of ½ MVA was used as an addend.
The ¼ filter was measured at SÚRO laboratory in Prague after the expiration of the calendar quarter.

Table No. 21 Activity concentrations of ^{90}Sr and transuranium elements discharged to the atmosphere from Temelín NPP in the year 2006 *(sampling by the LRKO at Temelín NPP, measuring by the SÚRO in Prague)*

Bldg	**Half year**	**Ventilation stack *)**	**Activity [Bq]**					
			^{90}Sr	**^{238}Pu**	**$^{239,240}Pu$**	**^{241}Am**	**^{242}Cm**	**$^{243,244}Cm$**
HVB-1	1	Internal	<210	< 1.90	< 1.50	< 1.9	< 12	< 1.6
		External	200	< 2.6	< 2.4	< 3.6	< 13	< 1.6
	2	Internal	<360	< 2.5	< 2.9	1600	17	< 1.6
		External	-	<18	<4.7	86	86	<8.3
	Total			>0 <25	>0 <11.5	>1686 <1692	>103 <128	>0 <13.1
HVB-2	1	Internal	110	< 1.6	< 1.3	< 5.3	< 24	< 2.5
		External	<54	< 2.4	< 1.8	< 0.95	< 8.5	< 0.80
	2	Internal	<140	< 4.1	< 4.7	52000	< 8.5	< 1.7
		External	-	170	83	87000	2300	90
	Total		-	>170 <178	>83 <91	>139000 <139007	>2300 <2341	>90 <95
BAPP	1		620	< 6.3	< 9.9	230	< 37	< 7.2
	2		<1300	150	70	44000	140	< 17
	Total		>620 <1920	>150 < 156	> 70 < 80	44230	> 140 < 177	> 0 <24

Note:
*) The internal ventilation stack is in continuous operation; the external ventilation stack is operated only during nuclear reactor outage.
Sign "<" indicates the minimum significant activity for reliability level 95%.
Values after the signs ">" and "<" determine the interval, in which the actual released activity in the air occurs.

Table No. 22 Overview of annual total activities of individual radionuclides in aerial discharges from Temelín NPP in the year 2006 *(taken from the Temelín NPP report)*

	BAPP	**HVB 1 internal stack**	**HVB 1 external stack**	**HVB 2 internal stack**	**HVB 2 external stack**	**Total**
Activity, activity range [GBq, MBq, kBq]						
Noble gases [GBq]						
Total[1)]	7 700					
^{133}Xe	-	933	1 493	>1 340; <1 350	>1 893; <1 895	>5660; <5670
^{135}Xe	-	>245; <246	>0.962; <1.79	>269; <271	>3.69; <4.95	>518; <524
^{41}Ar	-	>464; <465	<1.52	>589; <593	<2.15	>1050;<1 060
^{87}Kr	-	>16.3; <23.1	<1.85	>27.9; <36.1	<2.85	>44.2; <63.9
^{88} Kr	-	>32.8; <46.3	<2.59	>43.1; <65.5	4.17	>75.9; <119
^{3}H [GBq]	153	266	210	663	325	1 620
^{131}I in total [MBq]*	170					
Gaseous form	-	>7.64; <7.76	18.3	15.9	124	166
^{131}I	>0.151; <0.226	>0.0303; <0.0449	>0.102; <0.104	>0.171; <0.185	3.84	>4.29; <4.40
^{14}C [GBq]	>3.83; <3.84	246	0.891	309	0.998	561
Aerosols [kBq]						
^{51}Cr	>156; <724	>2.04; <110	>59.8; <85.8	>6.48; <132	>329; <365	>553; <1 420
^{54}Mn	>150; <174	>2.21; <12.1	>15.0; <17.3	>0.993; <14.4	>30.3; <32.3	>198; <250
^{57}Co	<55.8	<8.94	<2.63	<9.55	<5.95	<82.9
^{58}Co	>122; <160	>2.04; <11.6	>28.7; <30.8	>2.89; <15.8	>220; <223	>376; <441
^{60}Co	>179; <201	>9.36; <19.4	>9.01; <12.3	>0.424; <17.7	>32.8; <37.4	>230; <288
^{95}Zr	>281; <382	<18.8	>44.3; <50.0	>4.84; <27.8	>114; <125	>444; <604
^{95}Nb	>710; <739	>6.77; <17.8	>74.1; <76.2	>12.7; <26.5	>241; <243	>1 040; <1 100
^{103}Ru	>7.98; <74.2	<11.7	<3.89	<13.9	>71.8; <76.4	>79.8; <180
^{124}Sb	>545; <596	>27.2; <40.5	>16.9; <21.0	>11.7; <28.7	>218; <224	>818; <910
^{134}Cs	>326; <333	>59.5; <60.5	>11.0; <13.3	>54.0; <60.0	154	>604; <621
^{137}Cs	>340; <344	>61.2; <62.3	>17.6; <18.8	>53.0; <57.4	>140; <141	>612; <623
^{76}As	>179; <201	>122; <386	<134	<267	<275	>122; <1 060
^{89}Sr	<31.4	<6.20	<9.32	<4.38	<11.1	<62.4
^{90}Sr	<4.42	<0.970	<1.51	<0.800	<5.96	<13.7

Note:
1) Summary value of BAPP + HVB1(internal stack) + HVB1(external stack) + HVB2 (internal stack) + HVB2 (external stack) (41Ar, 85Kr, 85mKr, 87Kr, 88Kr, 133Xe, 135Xe, 135mXe, 138Xe).
*) Summary value of BAPP + HVB1(internal stack) + HVB1(external stack) + HVB2 (internal stack) + HVB2 (external stack).

Table No. 23 Overview of annual total activities of individual radionuclides in liquid discharges from Temelín NPP in the year 2006 *(taken from the Temelín NPP report)*

Radionuclide	^{3}H	^{51}Cr	^{54}Mn	^{59}Fe	^{57}Co	^{58}Co
Dimension	[GBq]	[MBq]				
Activity*	37 300	<232	>6.78; <30.3	<43.3	>0.0274; <22.1	>0.904; <23.9
Radionuclide	^{60}Co	^{65}Zn	^{95}Zr	^{95}Nb	^{103}Ru	^{110m}Ag
Dimension	[MBq]					
Activity*	>2.20; <28.8	<48.7	>1.67; <43.6	>9.17; <34.1	>0.0183; <25.8	>6.88; <35.8
Radionuclide	^{124}Sb	^{134}Cs	^{137}Cs	^{141}Ce	^{131}I	
Dimension	[MBq]					
Activity*	>37.3; <72.1	>74.9; <110	>76.6; <107	<40.2	>17.6; <45.9	

Note:

* Annual summary activity in effluents from 11 tanks of liquid wastes.

Table No. 24 Activity concentrations of noble gases and ^{14}C in aerial discharges from ÚJV Řež ventilation stack in the year 2006 *(sampling and measuring by the SÚRO)*

Date of sampling		20.9.2006
Nuclide	**Half life**	**[Bq/m^3]**
^{41}Ar	1.82 h	490 000
^{85}Kr	10.7 r	3.6
^{85m}Kr	4.48 h	420
^{87}Kr	1.27 h	350
^{88}Kr	2.86 h	1 000
^{133}Xe	5.25 d	< 250
^{133m}Xe	2.19 d	140
^{135}Xe	9.10 h	< 20
^{14}C (combustible forms)	5730 r	2.6
^{14}C (CO_2)		18

Note:

Sign "<" indicates the minimum significant activity for reliability level 95%.

The arithmetic mean of activity concentrations determined from measurement of 2 samples is indicated for individual days.

Table No. 25 Quarterly mean values of the photon dose equivalent rate measured by local TLD network in the vicinity of Dukovany NPP (*measuring by SÚRO - transport of dosimeters from/to measuring points by RC in Brno)*

Measuring point	**I/06**	**II/06**	**III/06**	**IV/06**	**Mean value**
	nSv/h				
Biskupice	114	111	105	103	**108**
Dukovany	119	106	107	101	**108**
Hartvíkovice	124	138	133	131	**132**
Mohelno	99	115	103	107	**106**
Moravský Krumlov	104	116	108	109	**109**
Náměšť nad Oslavou		123	119		**121**
Resice	109	126	122	115	**118**
Rouchovany	108	116	97	104	**106**
Skryje	74	69	73	65	**70**
Slavětice	114	113	107	104	**110**
Višňové	109	119	118	112	**115**
Vladislav	136	167	157	154	**154**

Note:
If the result is not provided, the dosimeter was stolen or damaged in the relevant location.

Table No. 25a Quarterly mean values of the photon dose equivalent rate measured by local TLD network in the vicinity of Dukovany NPP *(measuring by LRKO at Dukovany NPP)*

Measuring point	**I/06**	**II/06**	**III/06**	**IV/06**	**Mean value**
	nSv/h				
Biskupice	94	79	90	94	**89**
Březník	94	97	76	76	**86**
Čučice	97	83	79	94	**88**
Dalešice	83	97	76	115	**93**
Dolní Dubňany	68	61	54	68	**63**
Dukovanský mlýn	50	50	47	61	**52**
Dukovany	90	72	61	61	**71**
Hartvíkovice	104	94	97	112	**102**
Hrotovice	115	122	112	133	**121**

Contd. Table No. 25a

Measuring point	I/06	II/06	III/06	IV/06	Mean value
	nSv/h				
Hrotovice - Stínský rybník	68	61	58	68	**64**
Hrubšice	101	90	83	104	**95**
Ivančice	86	79	68	94	**82**
Jaroměřice nad Rok.	94	94	83	108	**95**
Jevišovice	104	104	104	104	**104**
Kordula	94	97	76	108	**94**
Kordula - pastvina	40	40	36	50	**42**
Lipňany - niva	47	61	47	58	**53**
Mikulovice	76	76	65	94	**78**
Mohelno	54	47	36	50	**47**
Mohelno - Horákův buk	58	68	58	76	**65**
Moravský Krumlov	90	68	76	79	**78**
Myslibořice	115	115	119	130	**120**
Náměšť n. Oslavou	83	76	72	90	**80**
Oslavany	79	86	83	101	**87**
Rouchovany	83	68	68	79	**75**
Skryjský mlýn	54	54	47	61	**54**
Slavětice	86	76	65	83	**78**
Tavíkovice	90	72	79	83	**81**
Trstěnice	83	76	68	86	**78**
Třebíč	137	126	133	144	**135**
Udeřice	90	97	79	112	**95**
Valeč	97	76	83	86	**86**
Vémyslice	115	94	86	104	**100**
Višňové	90	79	76	90	**84**
Vranov nad Dyjí	86	79	72	94	**83**
Znojmo	76	79	61	86	**76**

Note:
The measuring points are placed 3 m above the ground.

Table No. 26 Quarterly mean values of the photon dose equivalent rate measured by local TLD network in the vicinity of Temelín NPP in the year 2006 *(measuring by SÚRO - transport of dosimeters from/to measuring points by RC in České Budějovice)*

Measuring point	**I/06**	**II/06**	**III/06**	**IV/06**	**Mean value**
	nSv/h				
Dívčice	128	142	136	128	**134**
Litoradlice	104	112	99	98	**103**
Mydlovary	133	145	136	138	**138**
Protivín	137	147	142	129	**139**
Radonice	106	118	114	108	**111**
Ševětín	111	128	113	116	**117**
Týn nad Vltavou	117	116	117	109	**115**
Vodňany	130	145	132	125	**133**
Zliv	140	129	149	141	**140**

Note:
If the result is not provided, the dosimeter was stolen or damaged in the relevant location.

Table No. 26a Quarterly mean values of the photon dose equivalent rate measured by local TLD network in the vicinity of Temelín NPP in the year 2006 *(measuring by LRKO at Temelín NPP)*

Měřící místo	**I/06**	**II/06**	**III/06**	**IV/06**	**Mean value**
	[nSv/h]				
Býšov - ČEZ premises	117	119	126	130	**123**
Býšov - forester's house Strouha	110	121	125	136	**123**
Coufalka	107	128	127	143	**126**
Coufalka - forester's house	113	126	133	142	**129**
Červený Vrch	110	127	130	141	**127**
Dříteň - No. 116	120	126	134	143	**131**
Hněvkovice - ISOŠ	121	118	123	132	**124**
Hněvkovice - dam	113	129	124	142	**127**
Hůrka - soil sanitation	116	122	128	140	**127**
Kočín - No. 8	117	133	129	139	**130**

Contd. Table No. 26a

Measuring point	I/06	II/06	III/06	IV/06	Mean value
	[nSv/h]				
Lhota pod Horami - No. 27	144	166	163	173	**162**
Lhota pod Horami - cowshed	115	128	126	143	**128**
Lhota pod Horami - gasworks station	120	131	131	142	**131**
Litoradlice, No. 10	111	123	121	137	**123**
Malešice - No. 36	112	122	125	136	**124**
Malešice - farm	102	117	113	133	**116**
Neznašov	164	174	168	188	**174**
Nová Ves, No. 2	118	132	134	145	**132**
Planovy - No. 38	124	142	135	141	**136**
Předhájek - Všemyslice - No. 36	156	152	158	168	**159**
SRKO Bohunice	120	94	110	80	**101**
SRKO ČEZ-Temelín NPP	117	120	119	132	**122**
SKRO Litoradlice	119	126	129	139	**128**
SRKO Nová Ves	118	142	140	147	**137**
SRKO Sedlec			130	125	**128**
SRKO Zvěrkovice	117	121	126	142	**127**
Strachovice - transformer station	101	101	106	120	**107**
Temelín - meteorological station	106	88		97	**97**
Temelín - at outpatient clinic	120	124	125		**123**
Týn nad Vltavou - kindergarten	127	135	134	149	**136**
Týn nad Vltavou - water treatment plant	111	126	127	140	**126**
U palečků	110	120	126	136	**123**
Všemyslice - No. 33	124	130	132	137	**131**
Záluží	116	133	130	145	**131**

Note:
If the result is not provided, the dosimeter was stolen or damaged in the relevant location.

Table No. 27a Dukovany NPP vicinity *(activity concentration, surface activity and mass of radionuclides in the aerosols [Bq/m^3], in the fallouts [Bq/m^2] and in the environmental components [Bq/kg,l] - sampling and measuring by the LRKO - taken from the Dukovany NPP report)*

Component	Mean value	95% tolerance interval	Number of measurements	Of which >MDA
^{137}Cs				
Aerosols &)	-	<3.0E-06*	53	0
Total fallouts &)	-	<4.0E-01*	12	0
Soil	1.9E+01	7.4E+00 – 4.9E+02	7	7
Surface water	-	<1.4E-02*	16	0
Drinking water	-	<1.4E-02*	7	0
Underground water	-	<1.4E-02*	74	0
Milk	-	<4.0E-02*	36	0
Cereals a)	-	<8.0E-02*	2	0
Apples &)	<8.0E-02	-	1	0
Cabbage &)	<8.0E-02	-	1	0
Potatoes &)	<8.0E-02	-	1	0
Feedstuff a)	-	<8.0E-02*	3	0
Waste channel sediments	-	1.5E-01	1	1
Other sediments	-	4.9E+00 - 1.9E+01 *	2	2
^{90}Sr				
Surface water	-	<8.0E-03*	10	0
Milk	-	2.9E+01 – 4.0E+01*	3	3
Apples &)	5.8E-02	-	1	1
Cabbage &)	6.2E-02	-	1	1
Potatoes &)	7.2E-02	-	1	1
Cereals a)	1.0E-01	-	1	1
Feedstuff a)	-	8.6E-02 – 2.2E-01*	3	3
^{3}H				
Surface water 1)	4.8E+01	5.4E+00 – 2.4E+02	36	33
Surface water 2)	-	<1.0E+01*	20	0
Underground water, drill holes – vicinity of Dukovany NPP	-	<1.0E+01 – 5.1E+01*	71	4
Underground water, wells – Dukovany NPP premises	2.0E+01	2.0E=01 – 7.0E+02	8	4
Underground water, drill holes – Dukovany NPP premises	2.4E+02	2.1E-02 – 2.1E+03	242	102
Drinking water	1.8E+01	1.1E+00 – 1.4E+02	16	9

Note:
&) Composite sample.
a) Commodity includes indicated number of composite samples.
b) Dry-matter related.
1) Surface water affected by effluents from NPP.
2) Surface water not affected by effluents from NPP.
3) Sediment sampling is performed at surface water sampling points approximately 2 km and 35 km below OK effluents.
* With regard to data file properties, the range of values is used as data file characteristics.
MDA indicates minimum detectable activity.

Table No. 27b Temelín NPP vicinity *(activity concentration, surface activity and mass activity of radionuclides in the aerosols [Bq/m^3], in the fallouts [Bq/m^2] and in the environmental components [Bq/kg,l] - sampling and measuring by the LRKO - taken from the Temelín NPP report)*

Component	Mean value	95% tolerance interval	Number of measurements	Of which >MDA
^{137}Cs				
Aerosols[&)]	-	<1.1E-06 - 5.1E-06*	52	8
Fallouts	-	<3.8E-01*	24	1
Soil	2.7E+01	3.6E+00 – 1.6E+02	8	8
Surface water	-	<1.3E-02*	20	0
Drinking water	-	<1.5E-02*	8	0
Underground water		<1.4E-02*	15	0
Milk	-	<1.3E-01*	26	1
Cereals [a) b)]	-	<1.4E-01*	2	0
Apples	< 4.3-01	-	1	0
Forest fruits [&) b)]	3.4E+00	-	1	1
Fish	-	3.2E+00 - 6.2E+00*	3	3
Feedstuff [a) b)]	-	<1.9E-01 - 5.6E+01*	2	1
Waste channel sediments[3)]	1.8E+01	-	1	1
Other sediments	1.9E+01	-	1	1
^{90}Sr				
Surface water	-	<4.7E-02*	3	0
Milk	-			
^{3}H				
Surface water [1)]	-	<2.8E+00 – 4.9E+02*	33	15
Surface water [2)]	-	<2.8E+00*	12	0
Underground water, monitoring drill holes – vicinity of Temelín NPP	-	<2.8E+00*	15	0
Underground water, wells – vicinity of Temelín NPP	-	<2.8E+00*	5	0
Underground water, monitoring drill holes – Temelín NPP premises	-	<2.8E+00*	14	0
Underground water, drainage wells - Temelín NPP premises	-	<2.8E+00 - 1.3E+01*	36	4
Drinking water	-	<2.8E+00*	28	0

Note:

&) Composite sample.

a) Commodity includes indicated number of composite samples.

b) Dry-matter related.

1) Surface water affected by effluents from NPP.

2) Surface water not affected by effluents from NPP.

3) Sediment sampling is performed at surface water sampling points approximately 2 km and 35 km below OK effluents.

* With regard to data file properties, the range of values is used as data file characteristics.

Table No. 28 Dukovany NPP and Temelín NPP vicinity *(results of the measurement of surface activity of ^{137}Cs using field semiconductor spectrometry [Bq/m^2] - measuring by LRKO)*

Component	**Mean value**	**95 % tolerance interval**	**Number of measurements**	**Of which >MDA**
Dukovany NPP vicinity	1.9E+02	1.6E+01 – 1.5E+03	8	7
Temelín NPP vicinity	7.9E+02	8.7E+01 – 4.2E+03	24	21

Note:
MDA indicates minimum detectable activity for reliability level 95%.

Table No. 29a Dukovany NPP vicinity *(activity concentration, surface activity and mass activity of radionuclides in monthly fallouts [Bq/m^2] and in the environmental components [Bq/kg,l] - sampling by RC SÚJB in Brno, measuring by RC SÚJB in Brno and České Budějovice)*

Component	**Mean value**	**95% tolerance interval**	**Number of measurements**	**Of which >MVA**
^{137}Cs				
Total fallouts	-	<1.1E-01*	24	1
Milk	-	<6.5E-02*	10	0
Fresh fodder	-	<1.9E-02 - 2.1E-01*	4	2
Seno	-	<6.2E-02 - 3.1E-01*	2	1
Silage and fodder grass	-	<2.1E-02 - 3.4E-02*	3	1
Cereals	-	<8.5E-02*	7	0
Corn	<3.4E-02	-	1	0
Fruits	-	<2.6E-02*	3	0
Forest fruits	-	<7.4E-02*	4	1
Mushrooms	2.9E+01	-	1	1
^{3}H				
Surface water [1)]	6.2E+01	3.8E+00 – 3.7E+02	77	76
Surface water [2)]	-	<1.8E+00*	24	0
Drinking water [1)]	1.1E+01	3.4E+00 – 3.5E+01	5	5
Drinking water [2)]	-	<1.8E+00*	6	0

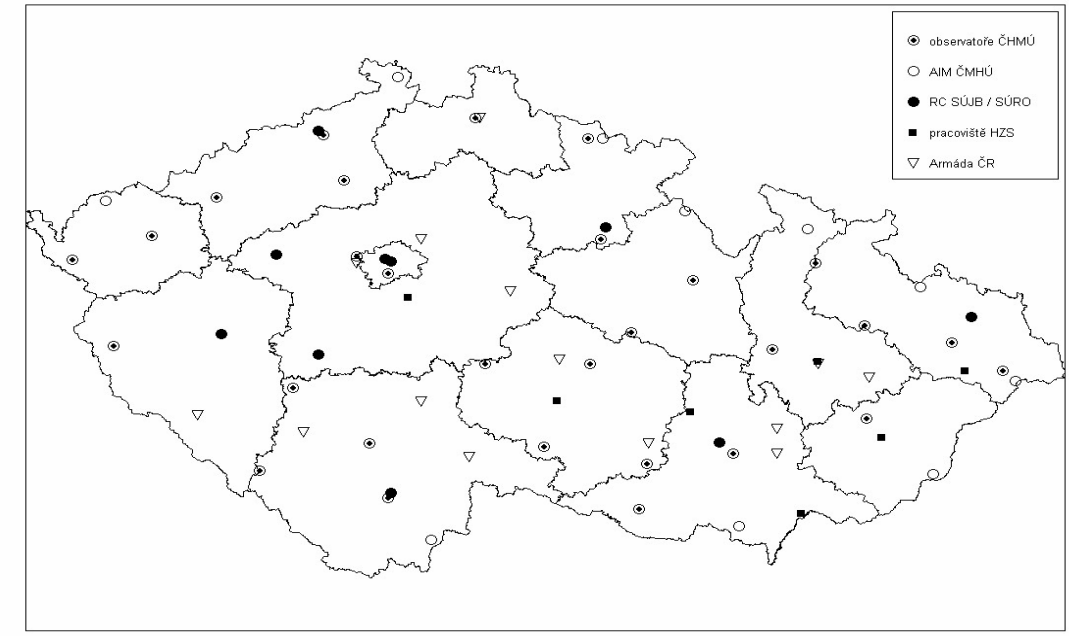
Note:
1) Water affected by effluents from NPP.
2) Water not affected by effluents from NPP.
* With regard to data file properties, the range of values is used as data file characteristics.
MDA indicates minimum detectable activity for reliability level 95%.

Table No. 29b Temelín NPP vicinity *(activity concentration, surface activity and mass activity of radionuclides in monthly fallouts [Bq/m^2] and in the environmental components [Bq/kg,l] - sampling and measuring by RC SÚJB in České Budějovice)*

Component	Mean value	95% tolerance interval	Number of measurements	Of which >MVA
^{137}Cs				
Total fallouts	-	<3.8E-02 - 6.4E-01*	24	12
Milk	-	<5.8E-02*	5	0
Corn	-	<4.5E-02*	2	0
Feedstuff	-	<1.5E-02 - 1.2E-01*	3	1
Fodder	-	3.2E-01 - 1.6E+00*	3	3
Silage and fodder grass	-	<2.7E-02 - 8.4E-01*	6	4
Fruits	-	<9.9E-02*	3	0
Vegetable	-	<7.5E-02*	6	1
Forest fruits	<5.7E-02	-	1	0
Mushrooms	-	<2.7E-02 - 8.2E+00*	5	1
^{3}H				
Surface water [1)]	1.4E+01	5.1E-02 - 2.0E+02	48	29
Surface water [2)]	-	<1.8E+00*	21	4
Underground water	<2.6E+00	-	1	1
Drinking water [1)]	-	<2.2E+01*	2	2
Drinking water [2)]	-	<1.8E+00*	6	0

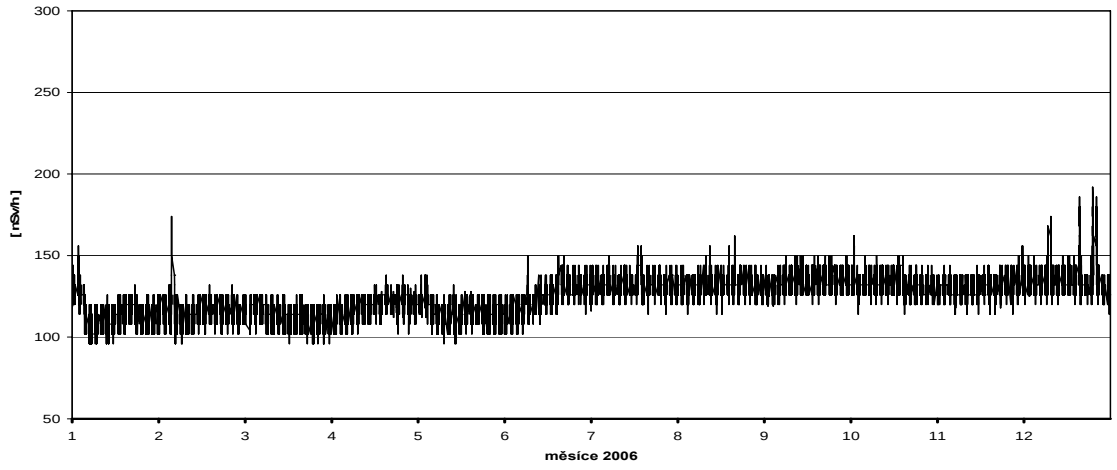
Note:
1) Water affected by effluents from NPP.
2) Water not affected by effluents from NPP.
* With regard to data file properties, the range of values is used as data file characteristics.
MDA indicates minimum detectable activity for reliability level 95%.

Figure No. 1 Early Warning Network (SVZ) of the Czech Republic´s Radiation Monitoring Network



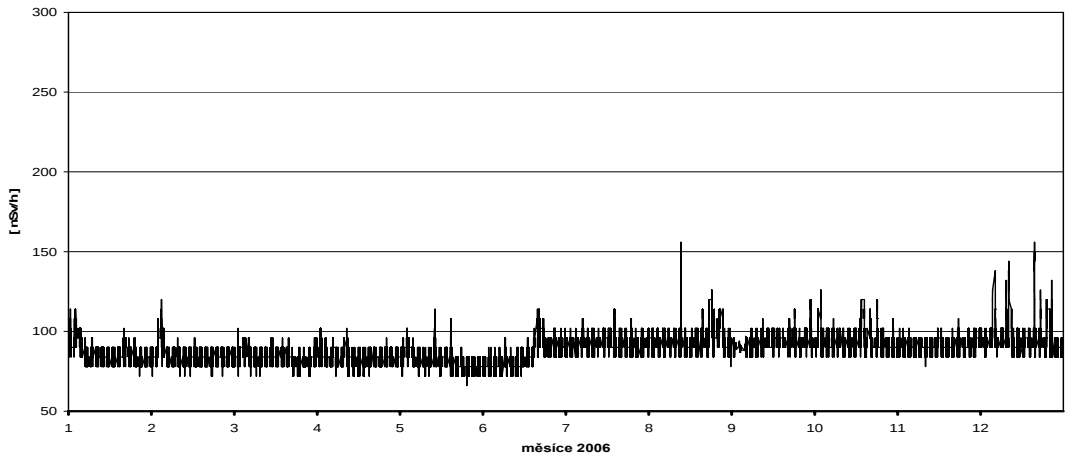
Legenda:
Observatoře ČHMÚ – ČHMÚ Monitoring Points
Pracoviště HZS – HZS Workplaces
Armáda ČR – Arm Forces of the Czech Republic

Figure No. 2a SVZ České Budějovice *(monitoring point at RC SÚJB)*



Legenda:
měsíce 2006 – months of 2006

Figure No. 2b SVZ Dukovany *(monitoring point at ČHMÚ observatory)*



Legenda:
měsíce 2006 – months of 2006

Figure No. 2c SVZ Temelín *(monitoring point at ČHMÚ observatory)*

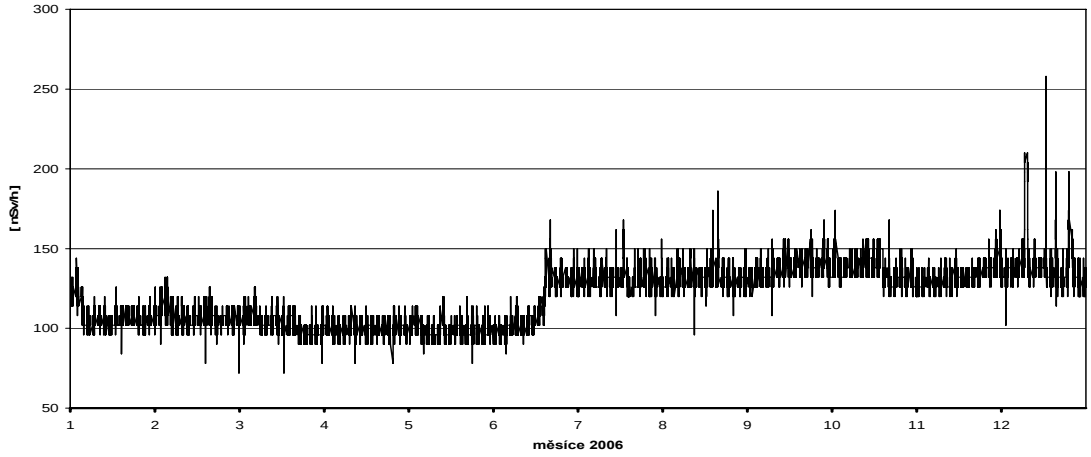


Figure No. 2 d SVZ Churáňov *(monitoring point at ČHMÚ observatory)*

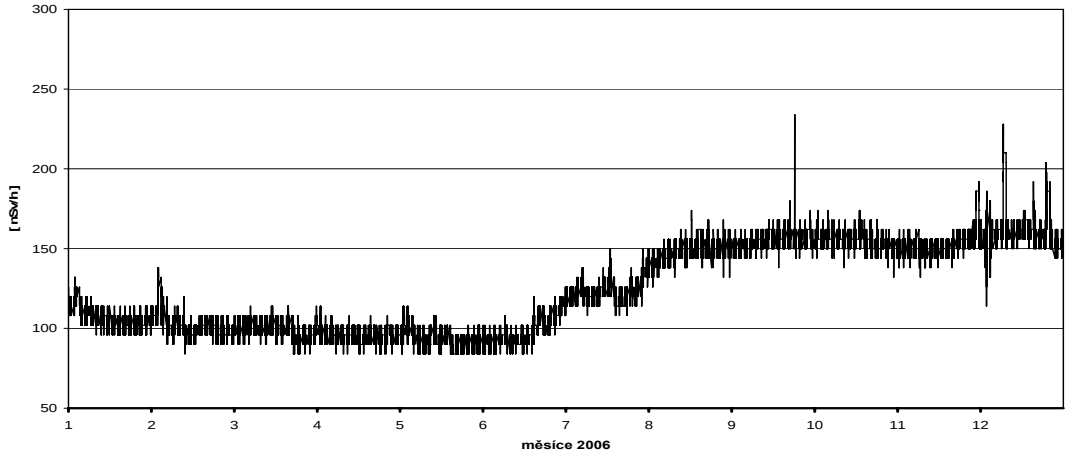
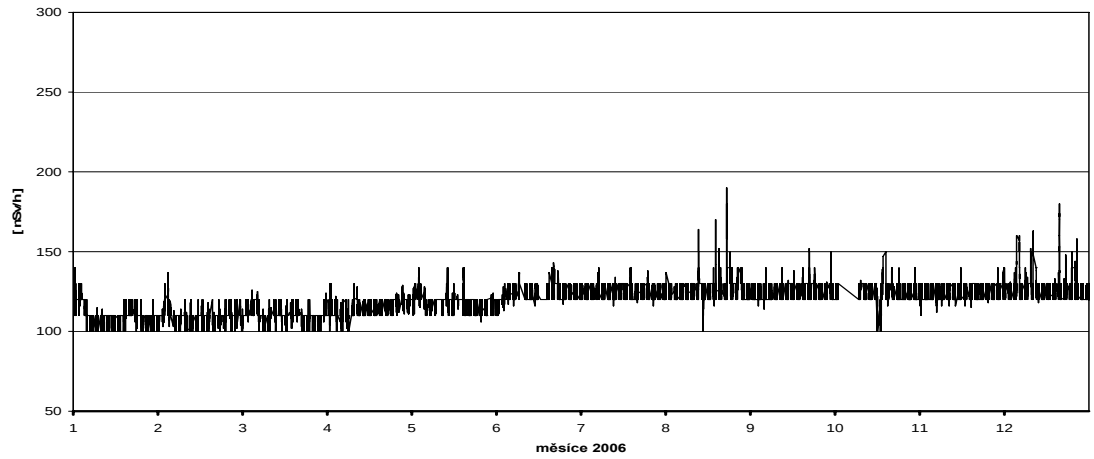


Figure No. 2e SVZ TDS Dukovany *(monitoring point TDS No. 1)*



Legenda:
měsíce 2006 – months of 2006

Figure No. 2f SVZ TDS Temelín *(monitoring point TDS No. 20)*

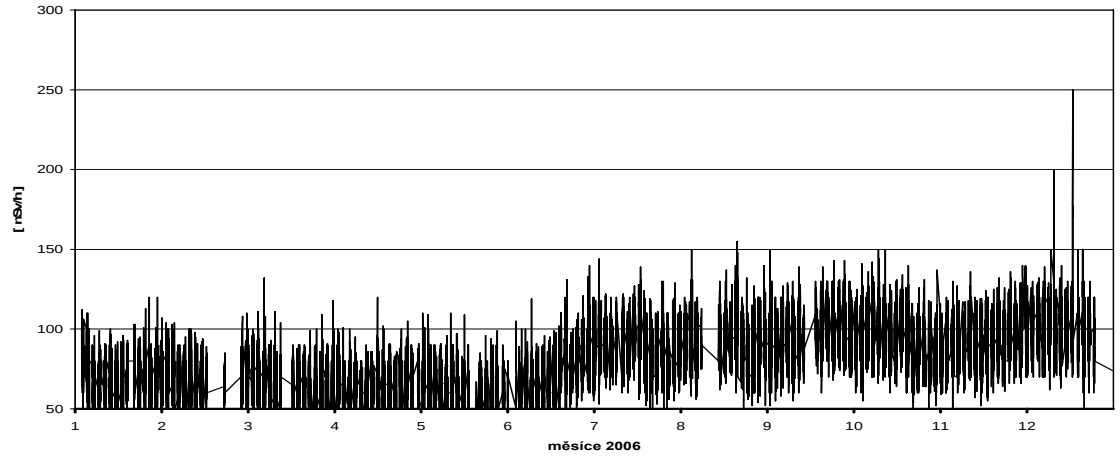


Figure No. 3 Territorial and local TLD network

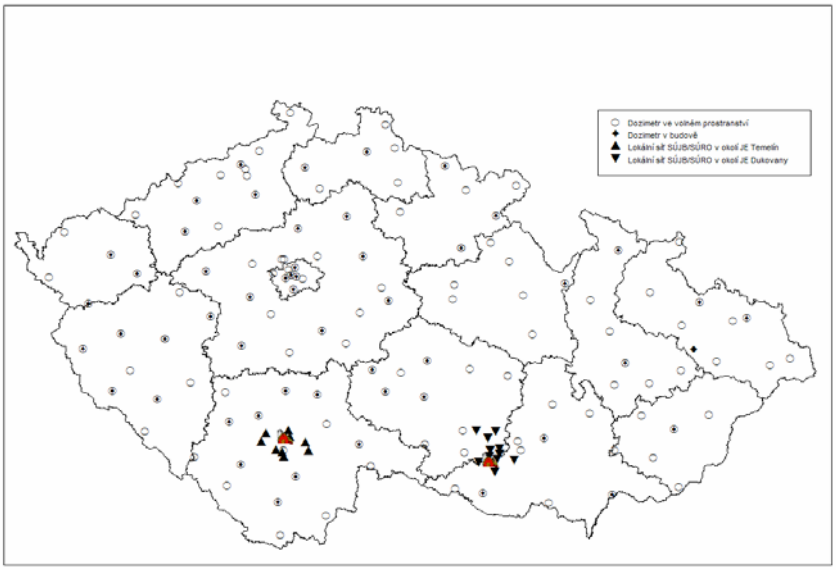


Figure No. 4a Continous monitoring of equivalent dose rate performed in course of MS monthly exercises *(measuring of RC Brno)*

Figure No. 4b Measuring of equivalent dose rate in the frame of „Terorista 2006“ exercise

Figure No. 5 Results of air monitoring in Central Bohemia polygon – north of Vlašim (*photon dose equivalent rate at 1m above ground)*

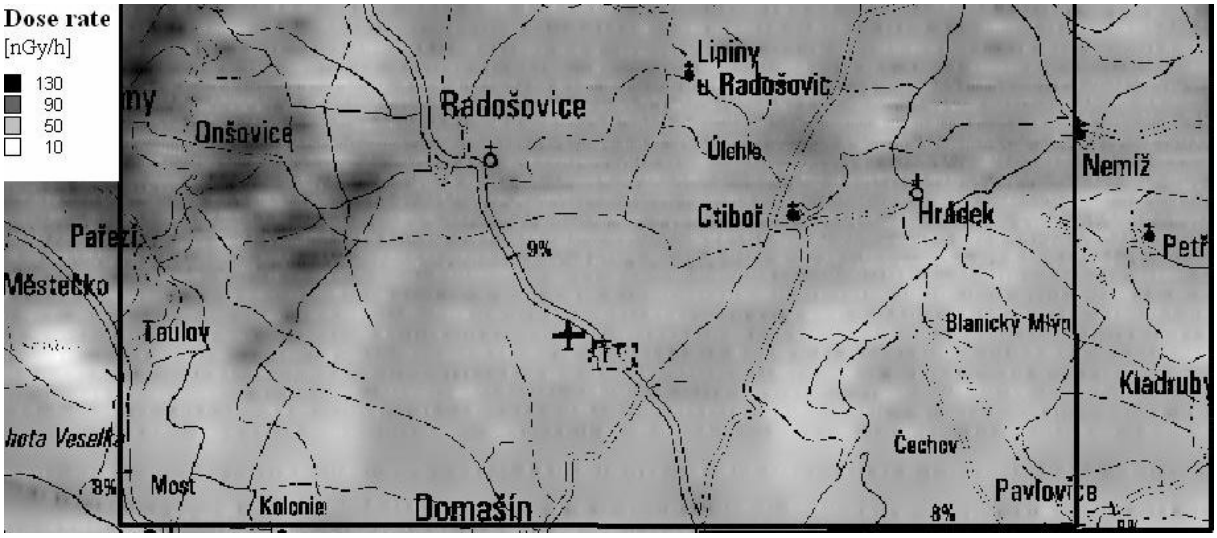


Figure No. 6 Location distribution for atmospheric aerosol sampling within RMS ČR

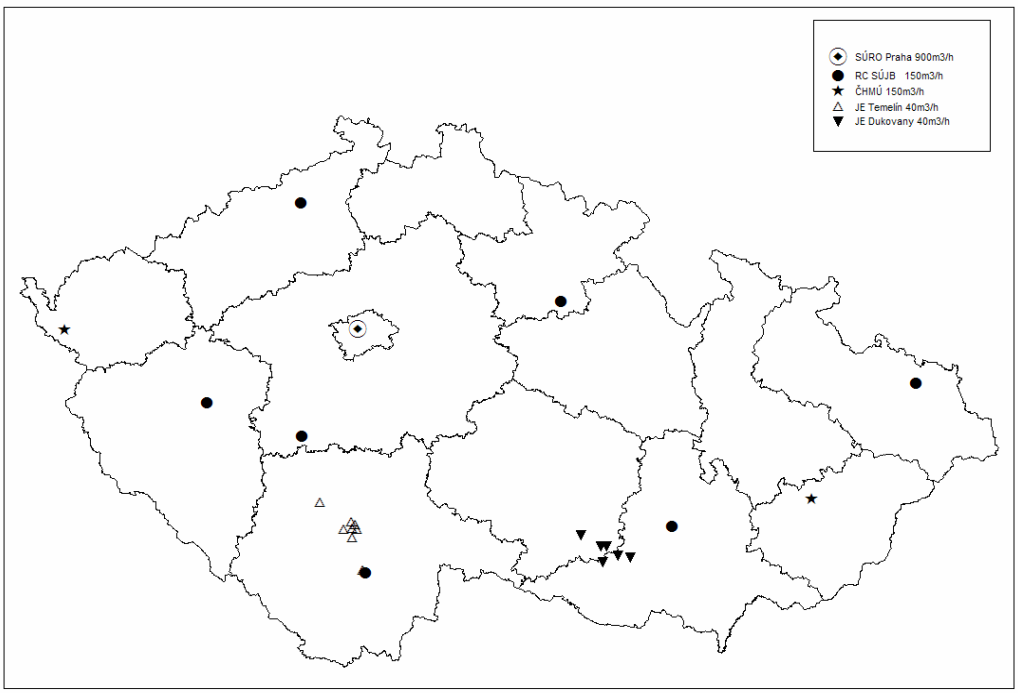
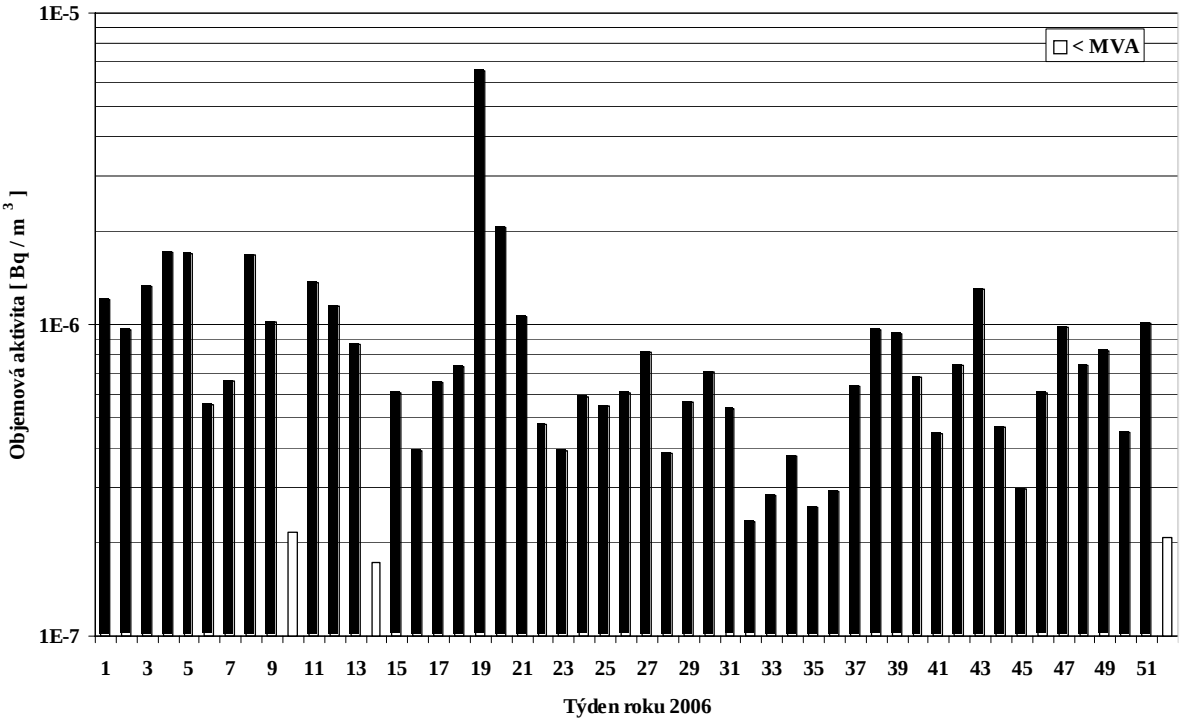


Figure No. 7a Activity concentration of ^{137}Cs in aerosol in the air in the year 2006 – MMKO SÚRO in Prague *(sampling and measuring by the SÚRO in Prague)*



Legend:
Objemová aktivita – Activity concentration (Bq/m^3)
Týden roku 2006 – Week of the year 2006

Figure No. 7b Activity concentration of ^{137}Cs in aerosol in the air in the year 2006 – MMKO in Ústí nad Labem *(sampling by RC in Ústí nad Labem, measuring by RC SÚJB in Ústí nad Labem and SÚRO in Hradec Králové)*

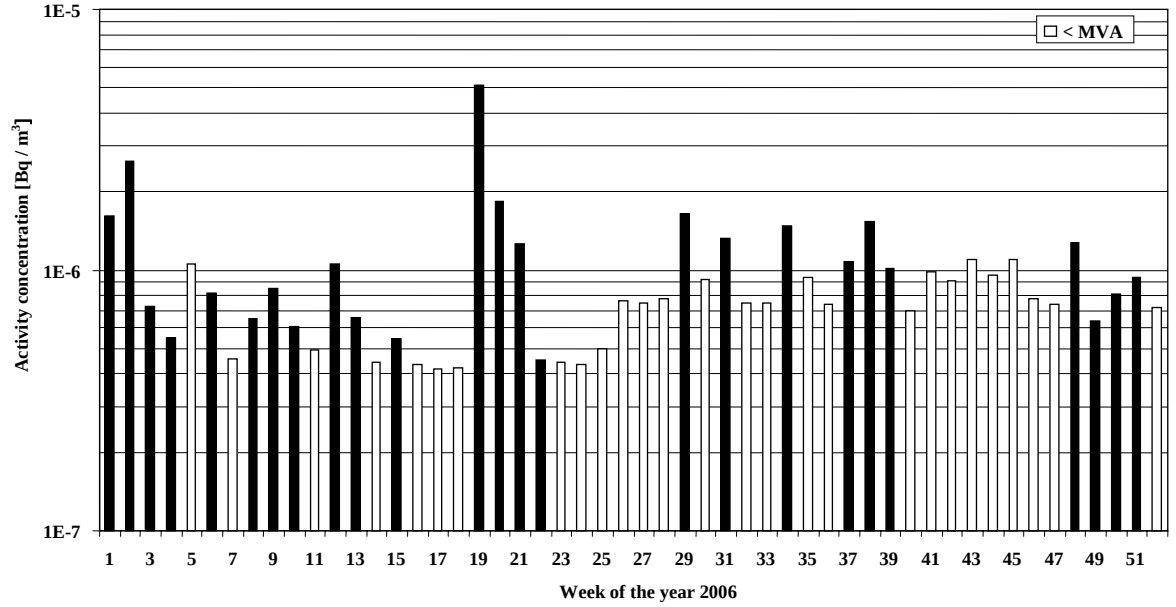
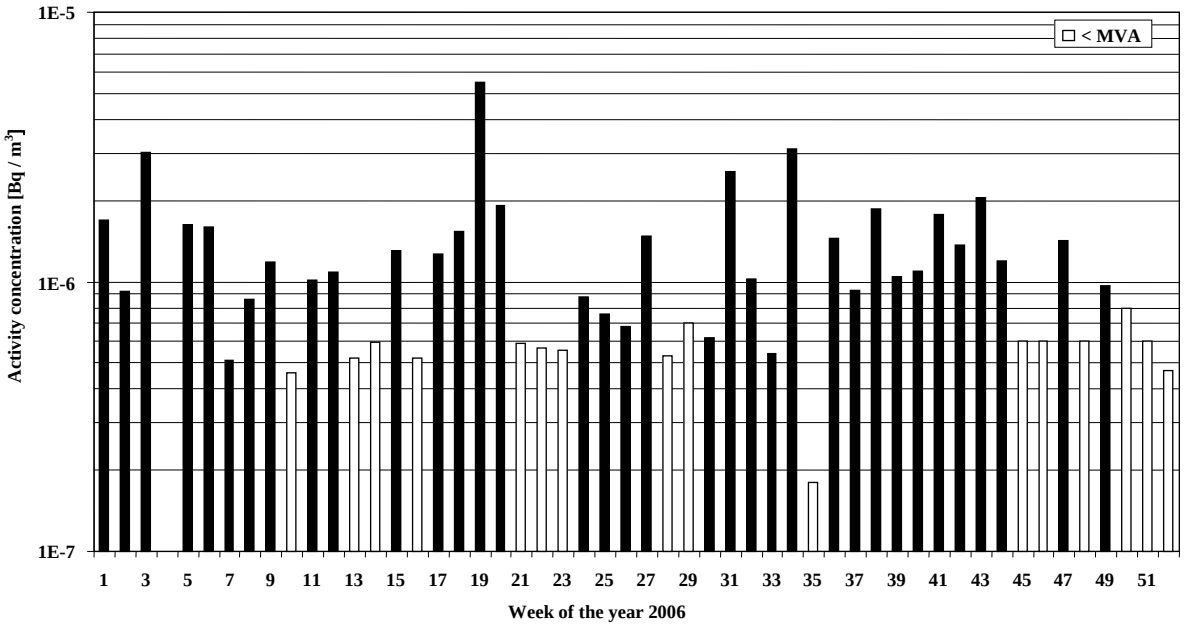


Figure No. 7c Activity concentration of ^{137}Cs in aerosol in the air in the year 2006 – MMKO in Hradec Králové *(sampling and measuring by RC SÚJB in Hradec Králové)*



Note:
Activity concentration in fourth week was not determined due to failure on the sampling device.

Figure No. 7d Activity concentration of ^{137}Cs in aerosol in the air in the year 2006 – MMKO in Ostrava *(sampling and measuring by the SÚRO in Ostrava)*

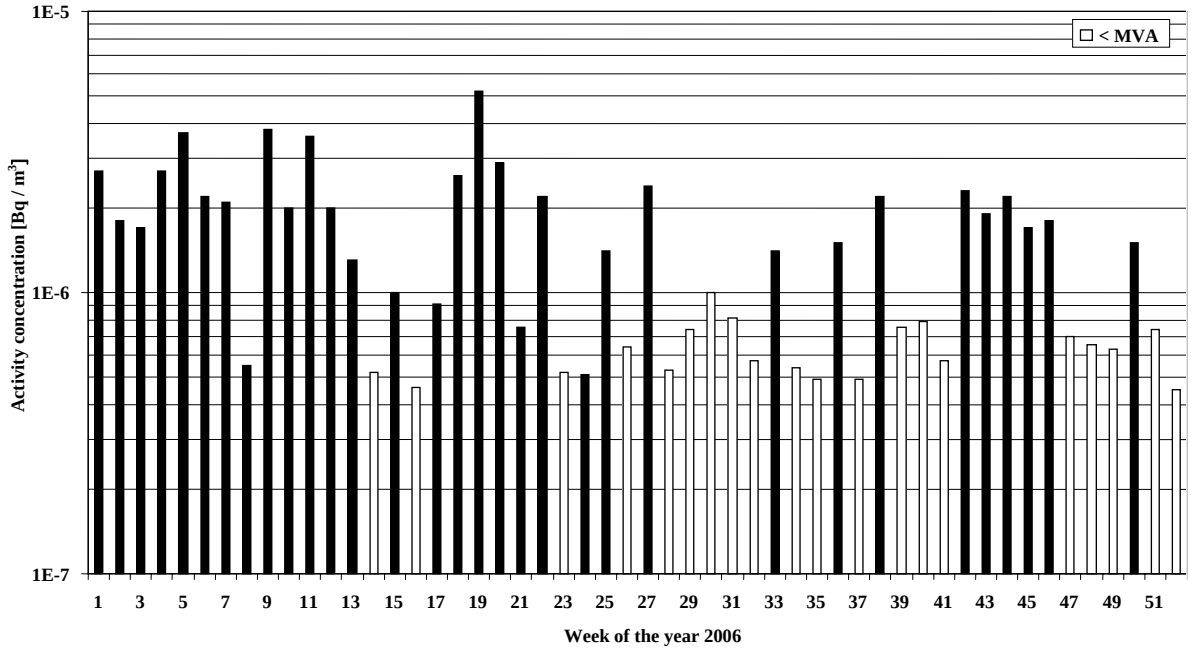


Figure No. 7e Activity concentration of ^{137}Cs in aerosol in the air in the year 2006 – MMKO in České Budějovice *(sampling and measuring by RC SÚJB in České Budějovice)*

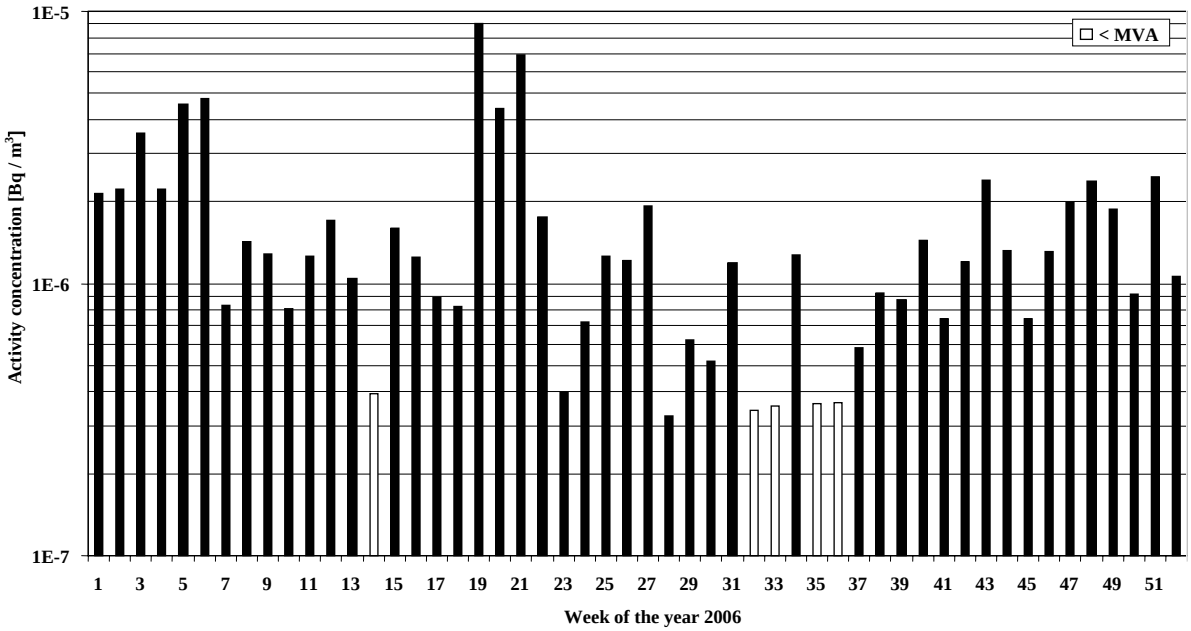


Figure No. 7f Activity concentration of ^{137}Cs in aerosol in the air in the year 2006 – MMKO in Plzeň *(sampling by RC SÚJB in Plzeň, measuring by RC SÚJB in Plzeň and RC SÚJB in České Budějovice)*

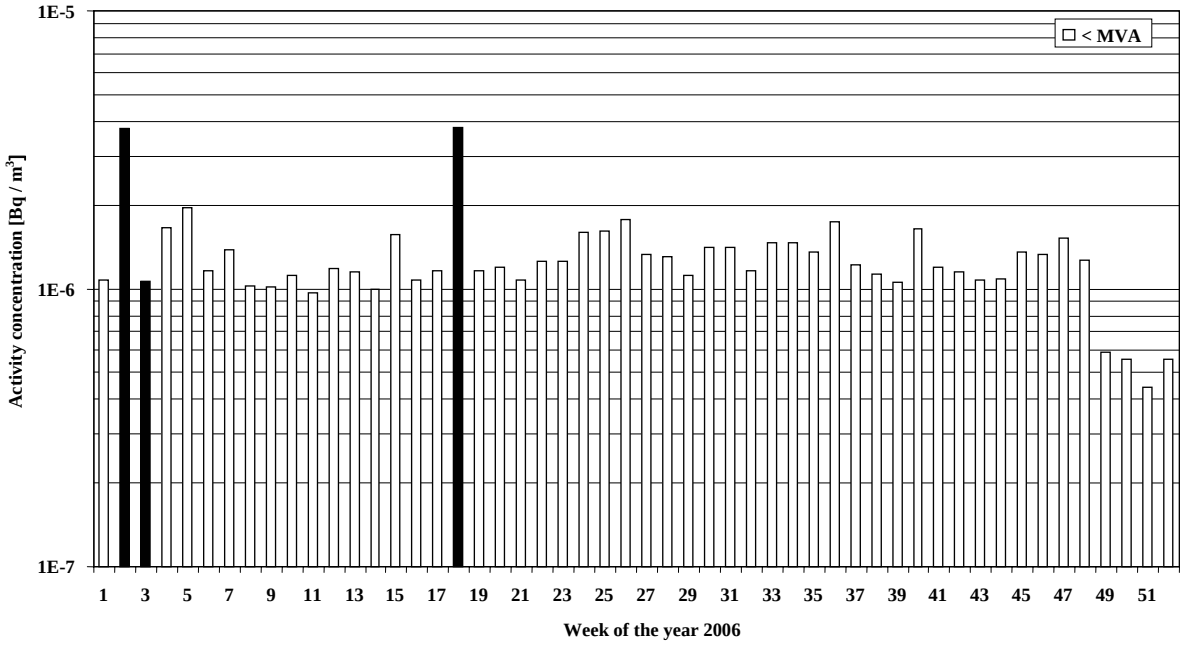


Figure No. 7g Activity concentration of ^{137}Cs in aerosol in the air in the year 2006 – MMKO in Brno *(sampling by RC SÚJB in Brno, measuring by RC SÚJB in České Budějovice)*

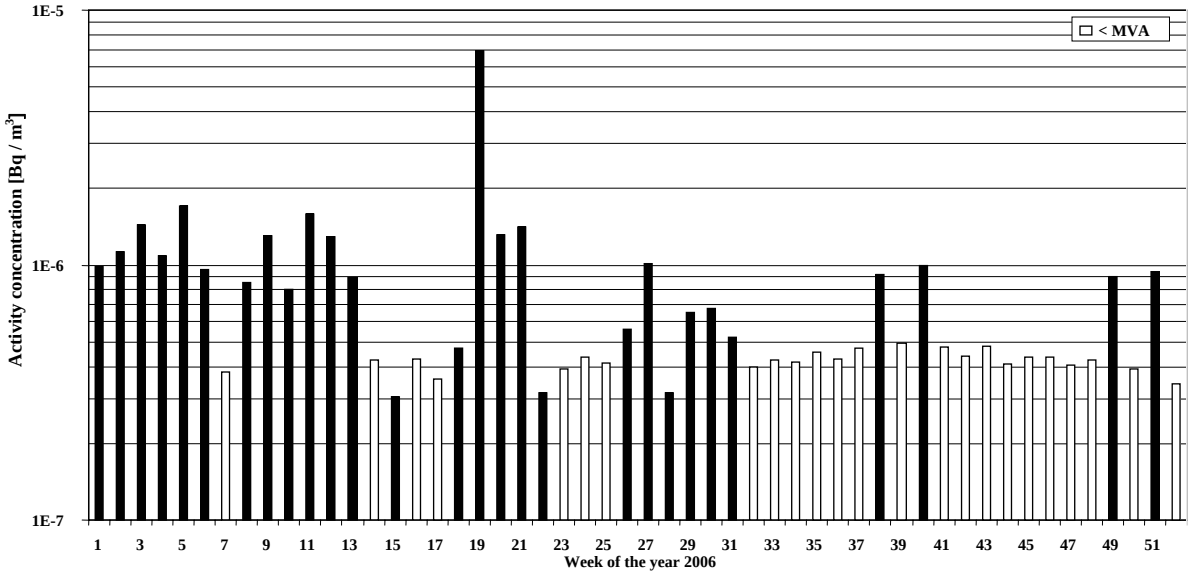


Figure No. 7h Activity concentration of ^{137}Cs in aerosol in the air in the year 2006 – MMKO in Holešov *(sampling by the ČHMÚ in Holešov, measuring by the SÚRO in Ostrava)*

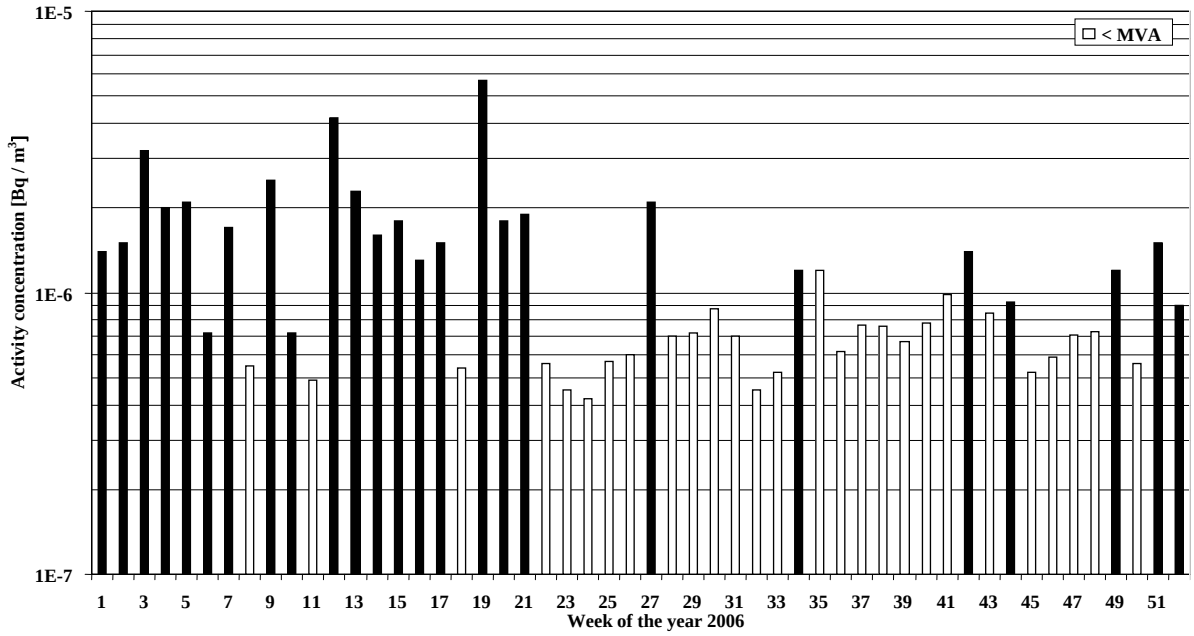


Figure No. 7i Activity concentration of ^{137}Cs in aerosol in the air in the year 2006 – MMKO in Cheb *(sampling by ČHMÚ in Cheb, measuring by the SÚRO in Prague)*

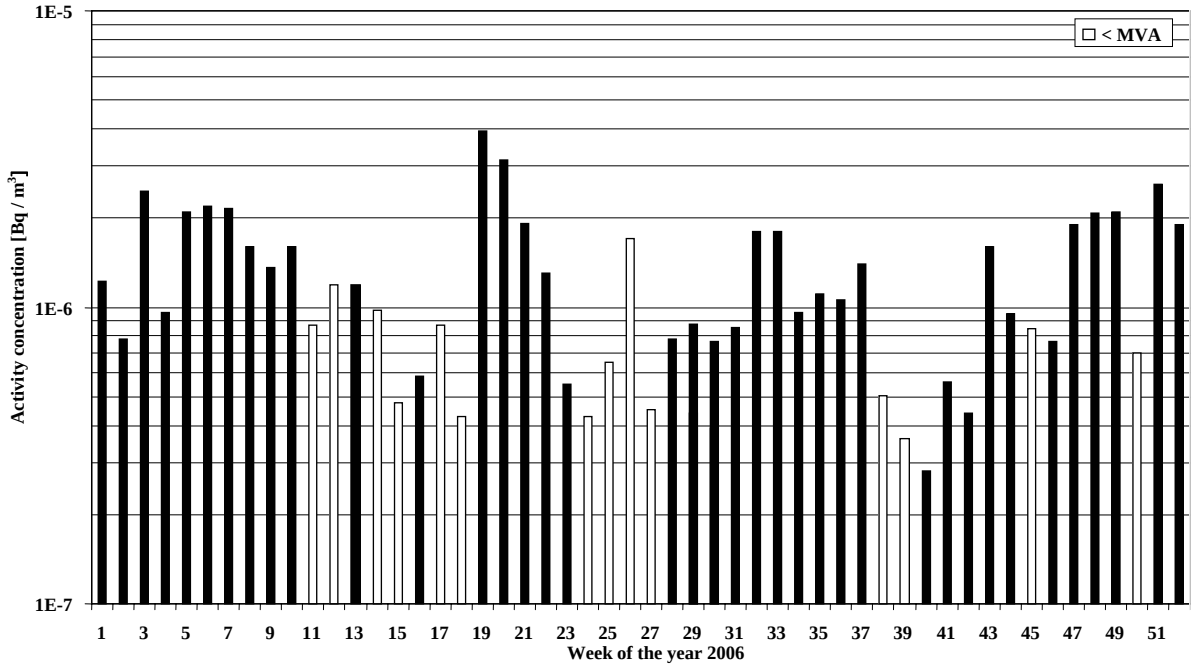


Figure No. 8a Activity concentration of selected radionuclides in aerial aerosols, monthly mean values – MMKO SÚRO in Prague *(sampling and measuring by the SÚRO in Prague)*

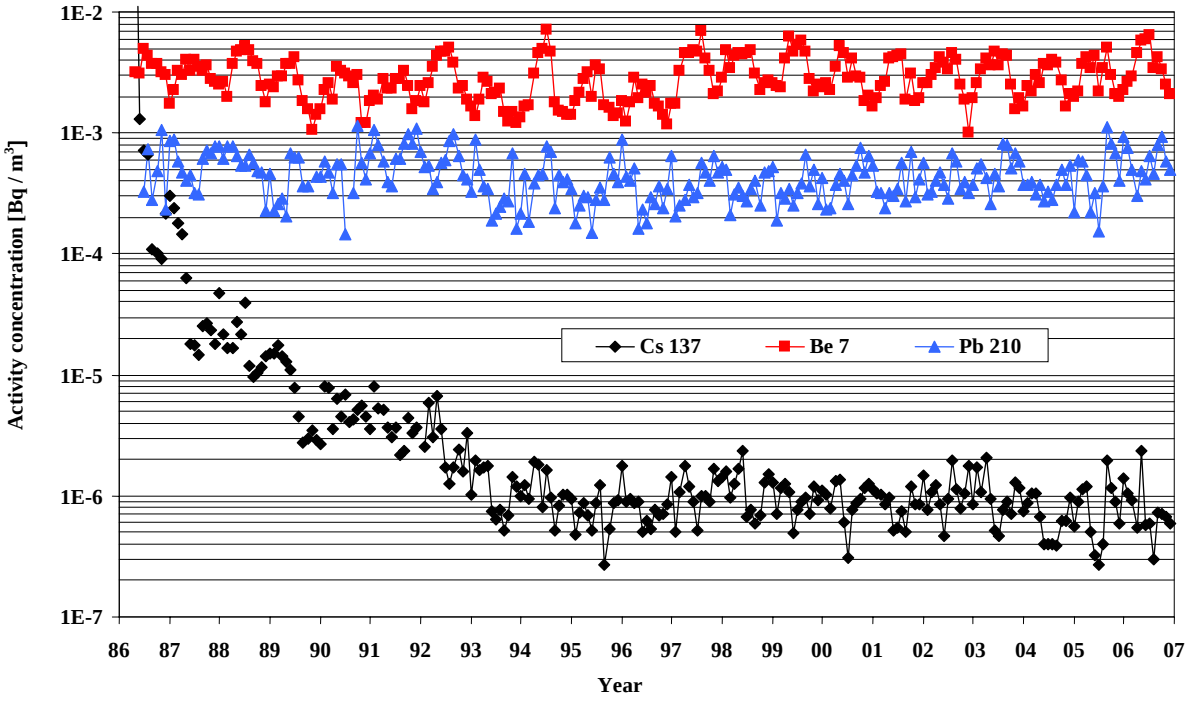


Figure No. 8b Activity concentration of ^{90}Sr, ^{238}Pu and $^{239,240}Pu$ in aerial aerosols since the year 1995 *(sampling and measuring by SÚRO in Prague)*

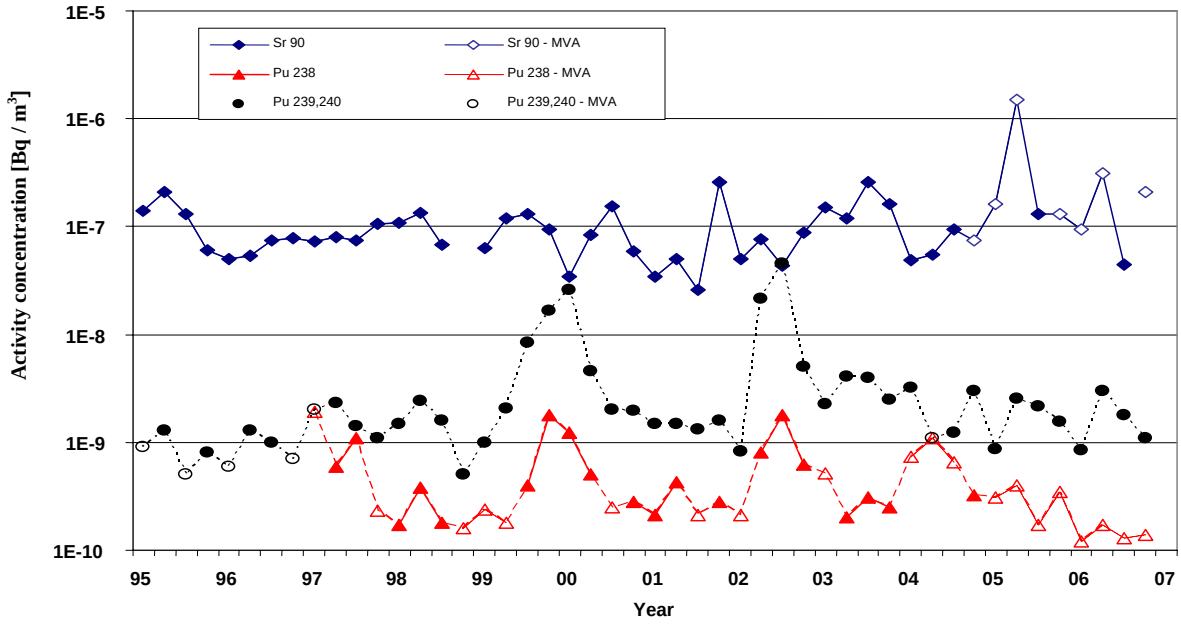


Figure No. 9a Activity concentration of ^{85}Kr in the air – MMKO in Prague

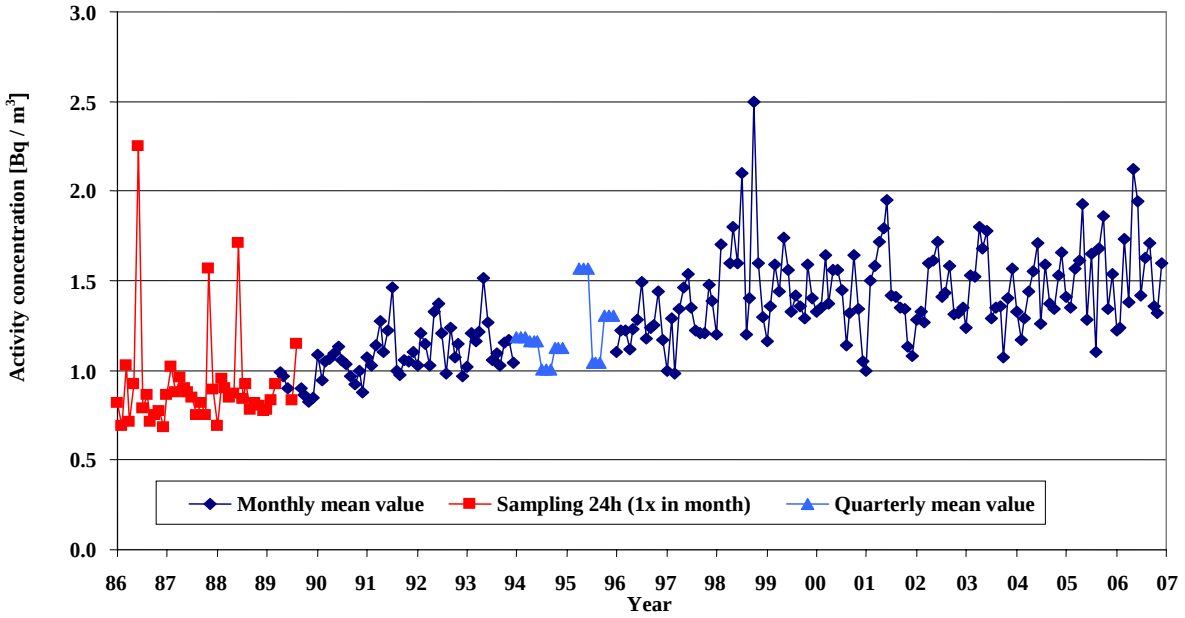


Figure No. 9b Activity concentration of ^{14}C in the air in the form of CO_2 – MMKO in Prague

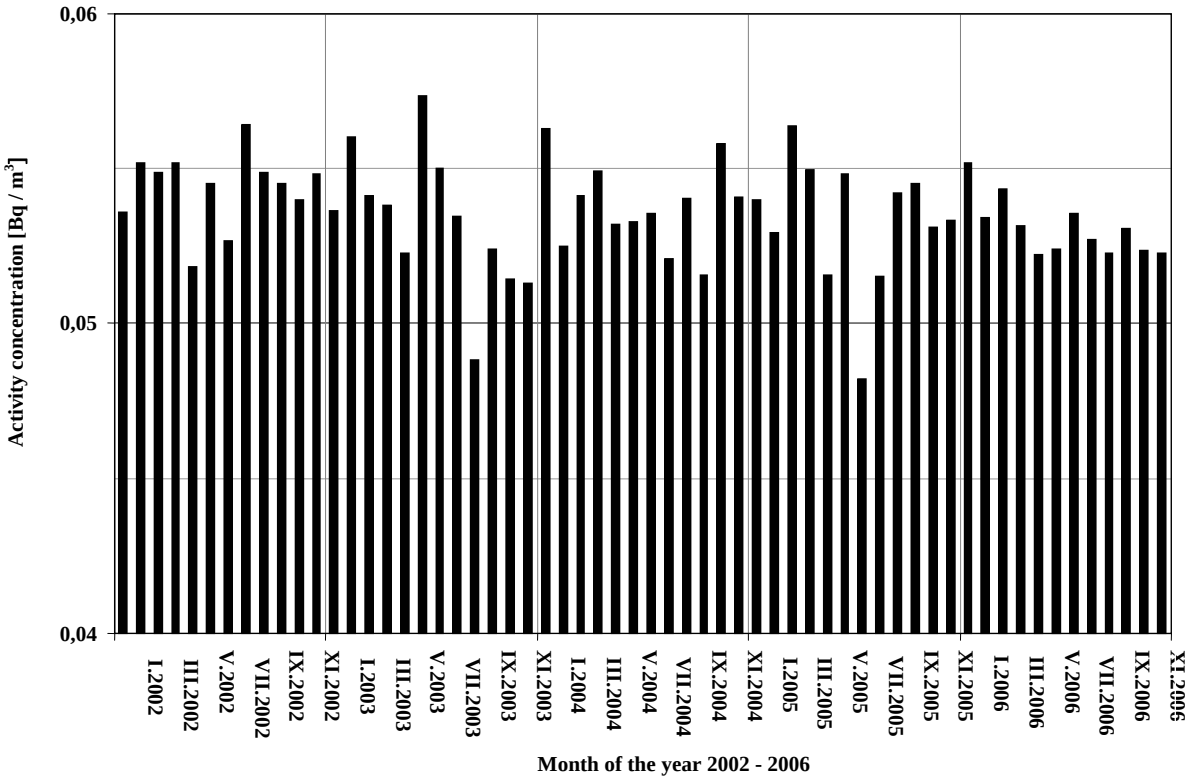


Figure No. 10a Surface activity of ^{137}Cs in fallouts in the year 2006 – MMKO in Prague, fallout captured on water surface *(sampling and measuring by the SÚRO in Prague)*

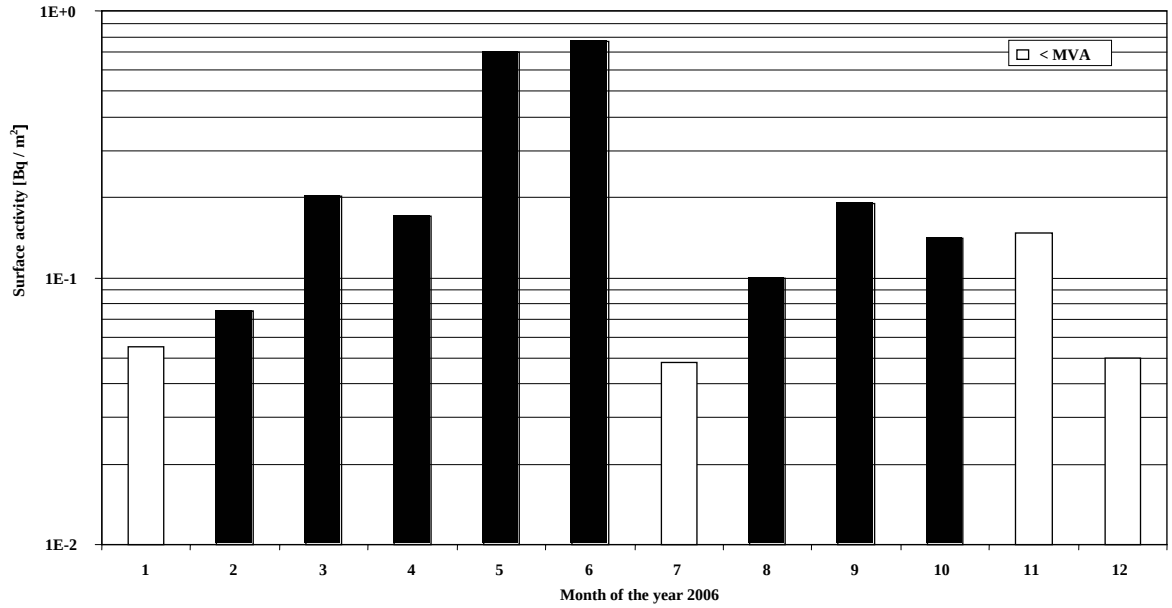


Figure No. 10b Surface activity of ^{137}Cs in fallouts in the year 2006 – MMKO in Ústí nad Labem *(sampling by RC SÚJB in Ústí nad Labem, measuring by RC SÚJB in Ústí na Labem and the SÚRO in Hradec Králové)*

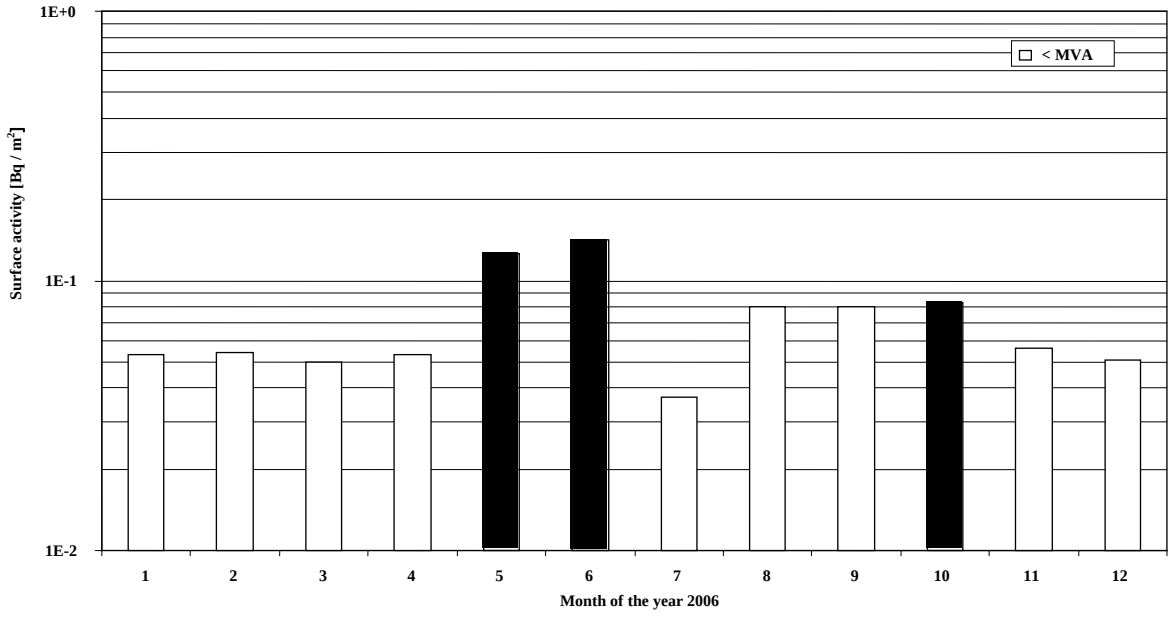


Figure No. 10c Surface activity of ^{137}Cs in fallouts in the year 2006 – MMKO in Hradec Králové *(sampling and measuring by RC SÚJB in Hradec Králové)*

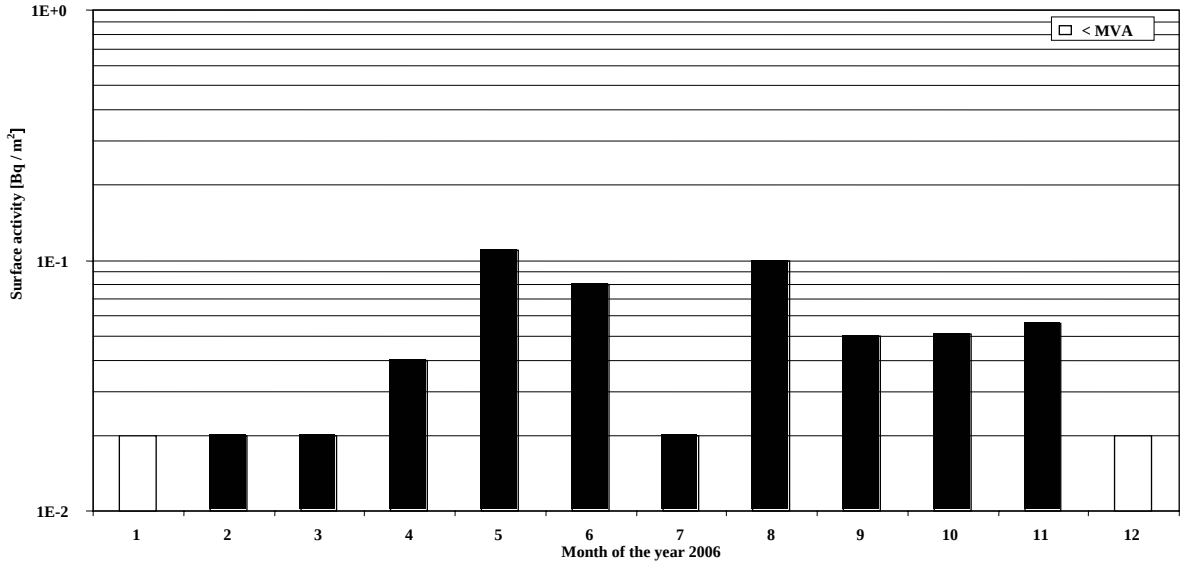


Figure No. 10d Surface activity of ^{137}Cs in fallouts in the year 2006 – MMKO in Ostrava *(sampling and measuring by the SÚRO in Ostrava)*

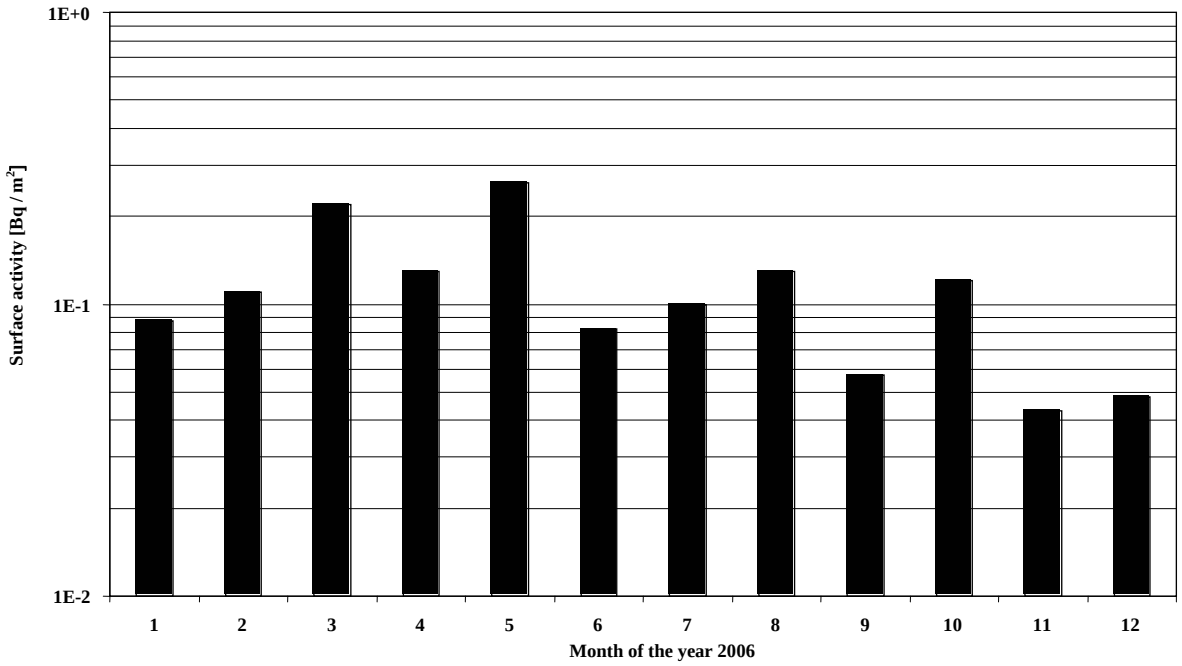


Figure No. 10e Surface activity of ^{137}Cs in fallouts in the year 2006 – MMKO in České Budějovice *(sampling and measuring by RC SÚJB in České Budějovice)*

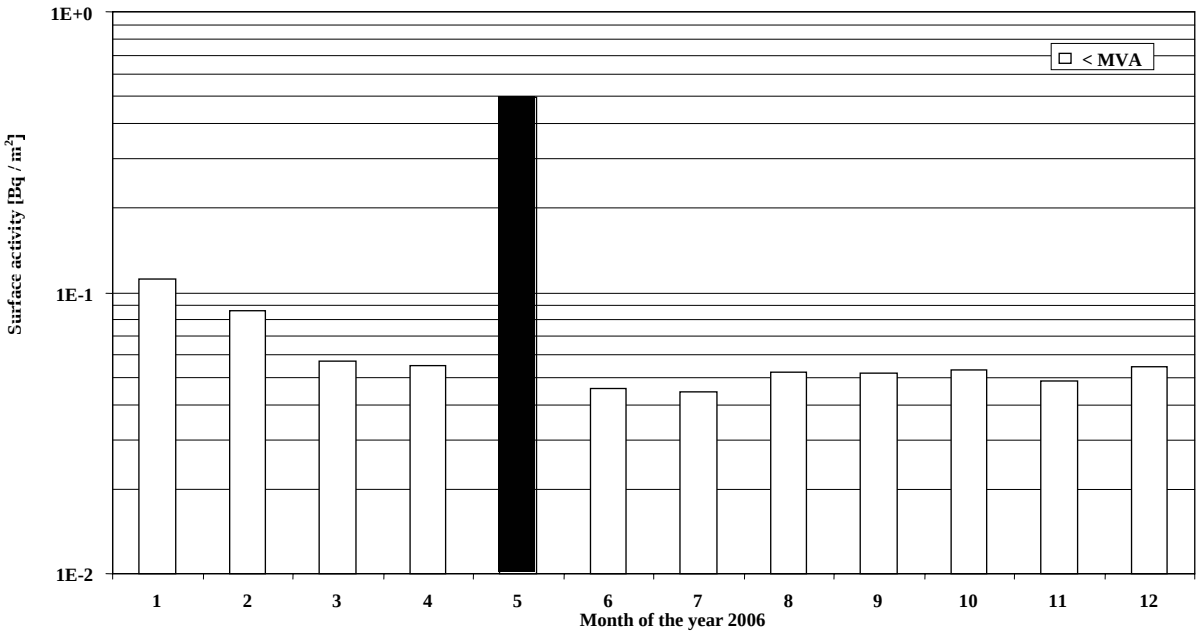


Figure No. 10f Surface activity of ^{137}Cs in fallouts in the year 2006 – MMKO in Plzeň *(sampling by RC SÚJB in Plzeň, measuring by RC SÚJB in Plzeň and RC SÚJB in České Budějovice)*

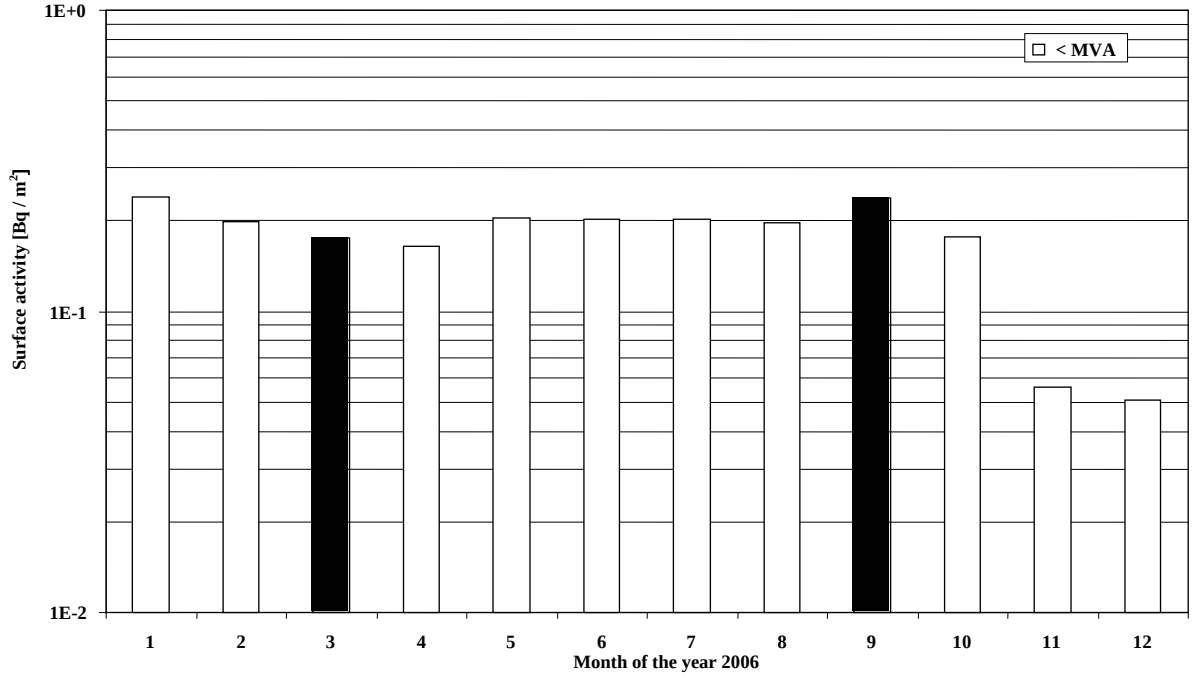


Figure No. 10g Surface activity of ^{137}Cs in fallouts in the year 2006 – MMKO in Brno *(sampling by RC SÚJB in Brno, measuring by RC SÚJB in České Budějovice)*

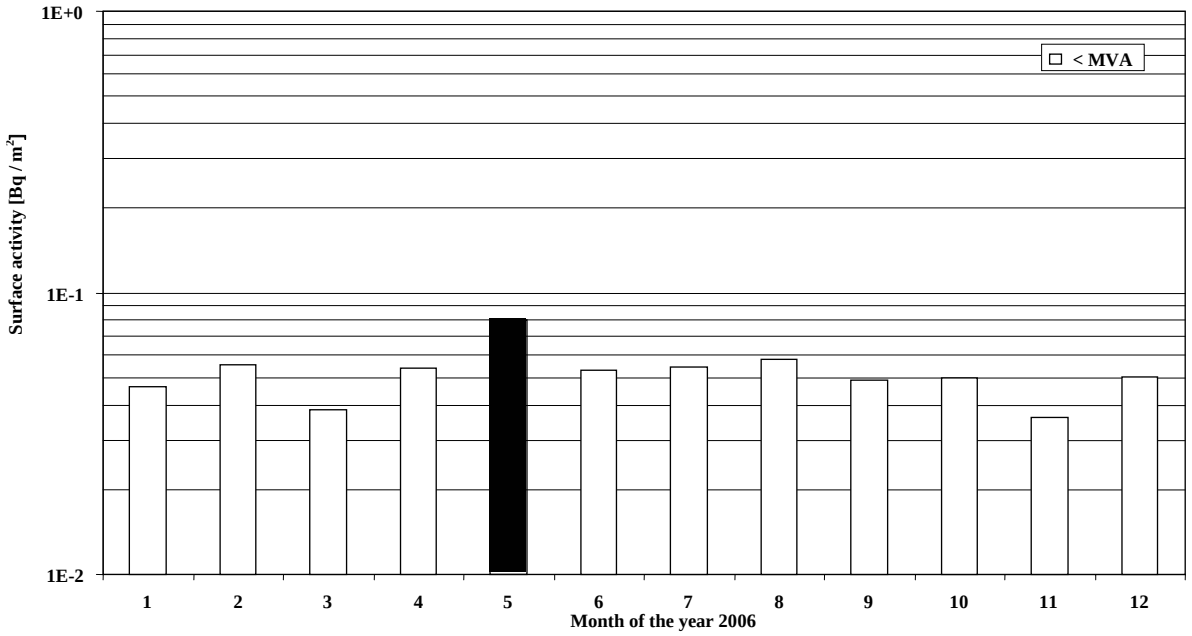


Figure No. 11a Surface activity of selected radionuclides in fallouts – MMKO SÚRO in Prague *(sampling and measuring by the SÚRO in Prague)*

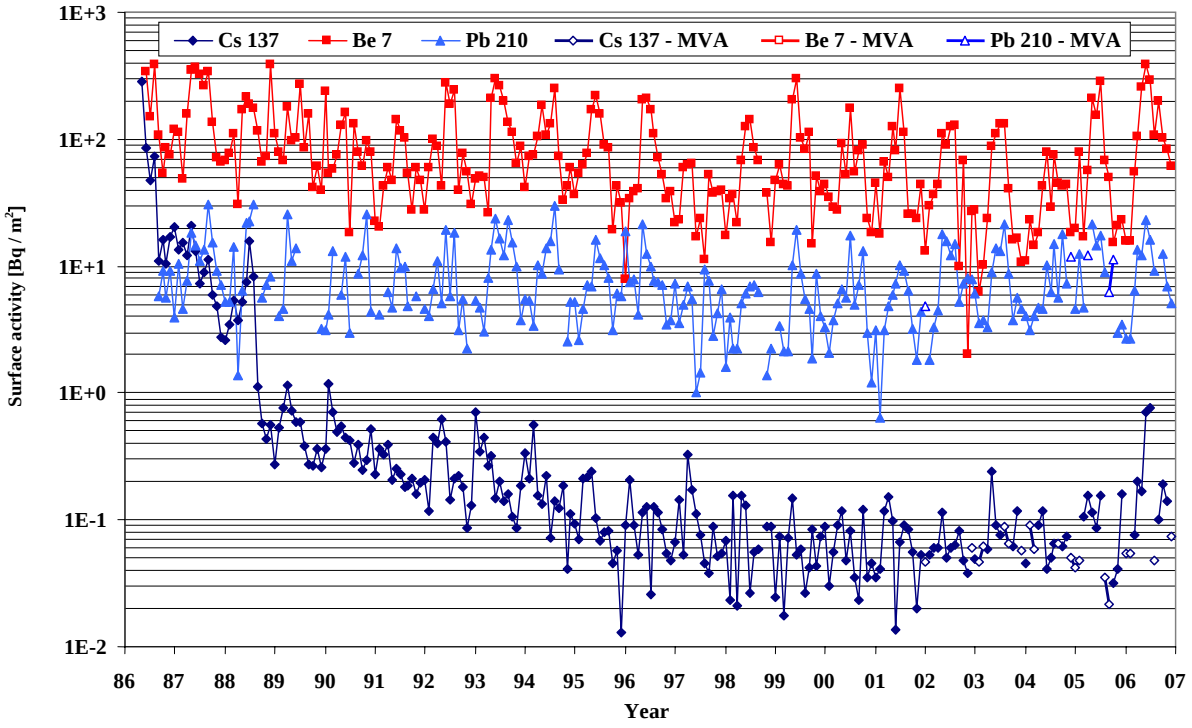


Figure No. 11b Activity concentration of ^{3}H in precipitation *(sampling and measuring by the SÚRO in Prague)*

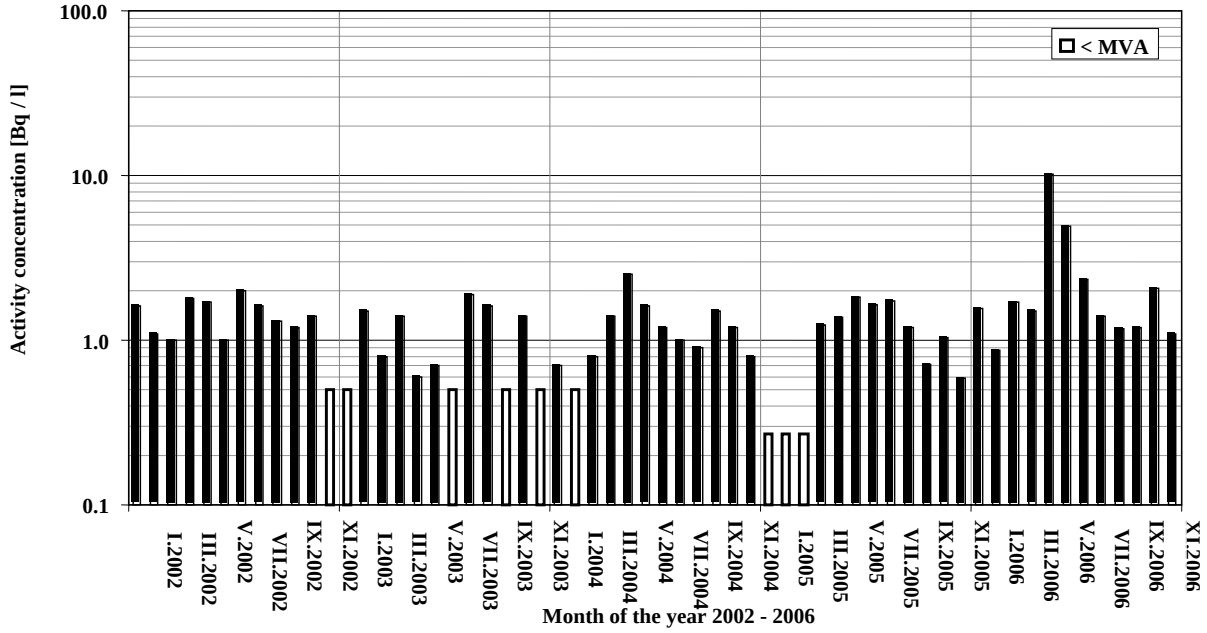


Figure No. 12a Activity concentration of ^{3}H in surface water in the year 2006 – Labe river basin – profile Hřensko (Labe) *(sampling and measuring by Povodí, s.p., the VÚV TGM in Prague)*

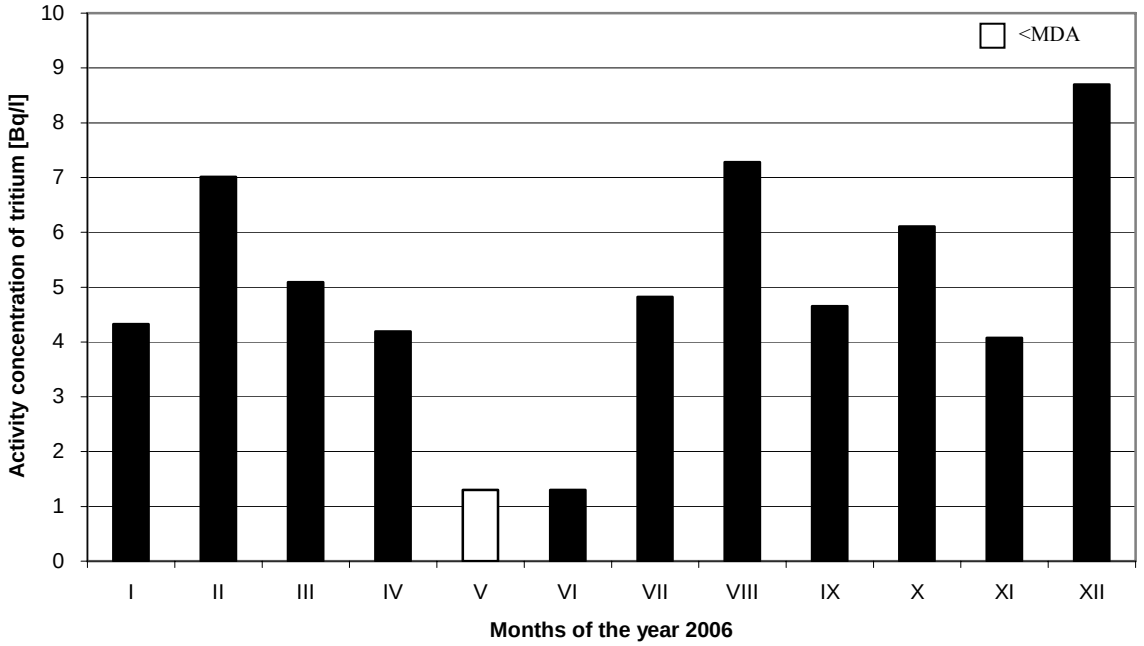


Figure No. 12 b Activity concentration of ^{3}H in surface water in the year 2006 – Morava river basin – profile Lanžhot (Morava) *(sampling and measuring by Povodí, s.p., the VÚV TGM in Prague)*

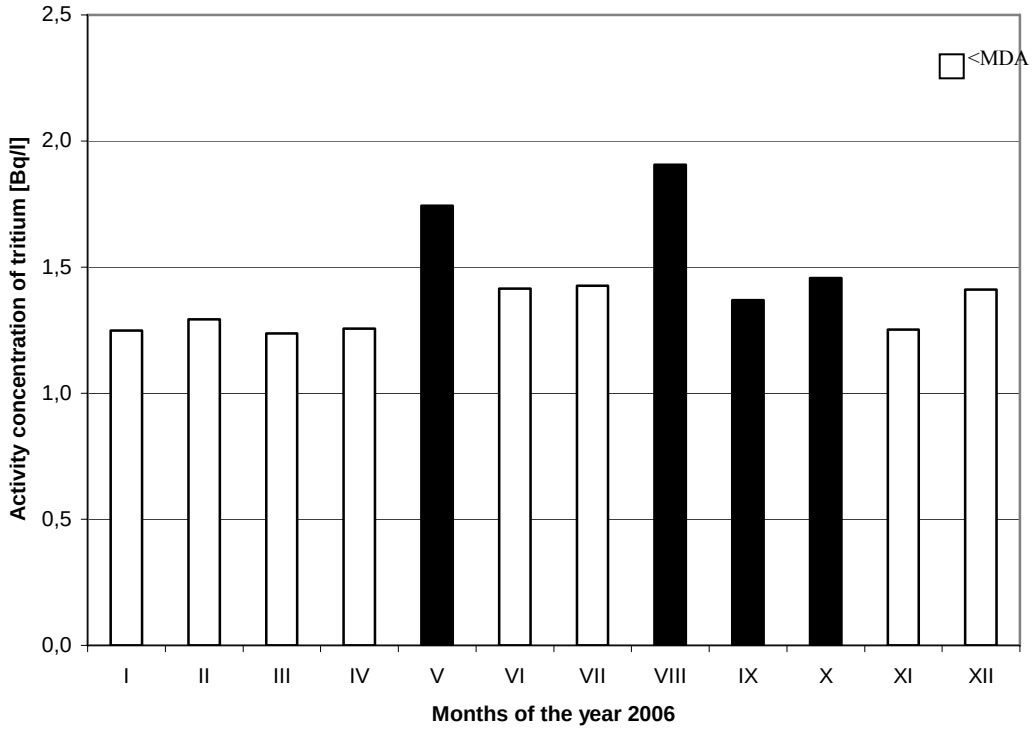


Figure No. 12c Activity concentration of ^{3}H in surface water in the year 2006 – Odra river basin – profile Bohumín (Odra) *(sampling and measuring by Povodí, s.p.,the VÚV TGM in Prague)*

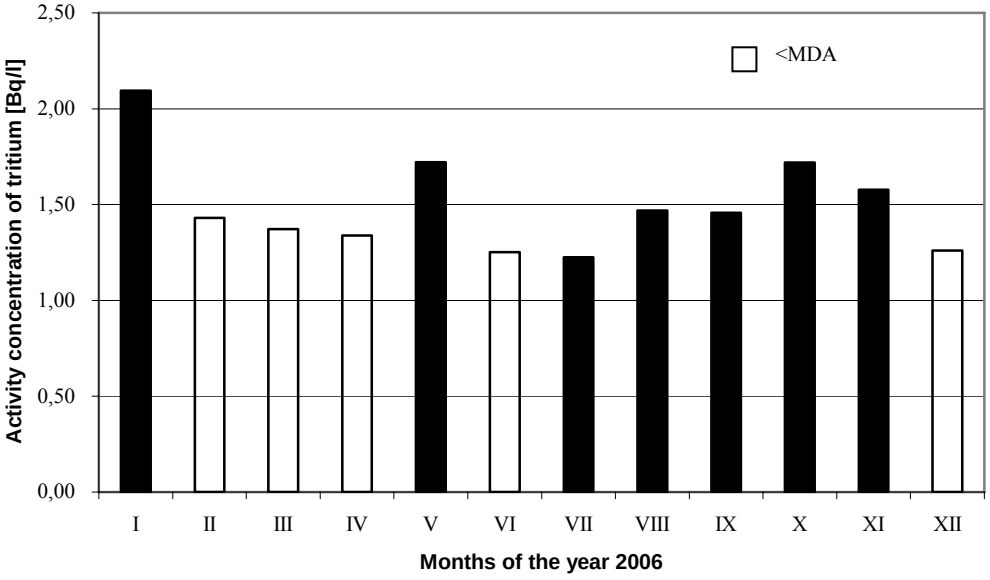


Figure No. 13 Annual mean values of ^{137}Cs mass activity in pork and beef and activity concentration of ^{137}Cs in milk from the year 1986 *(sampling and measuring by RC SÚJB and the SÚRO)*

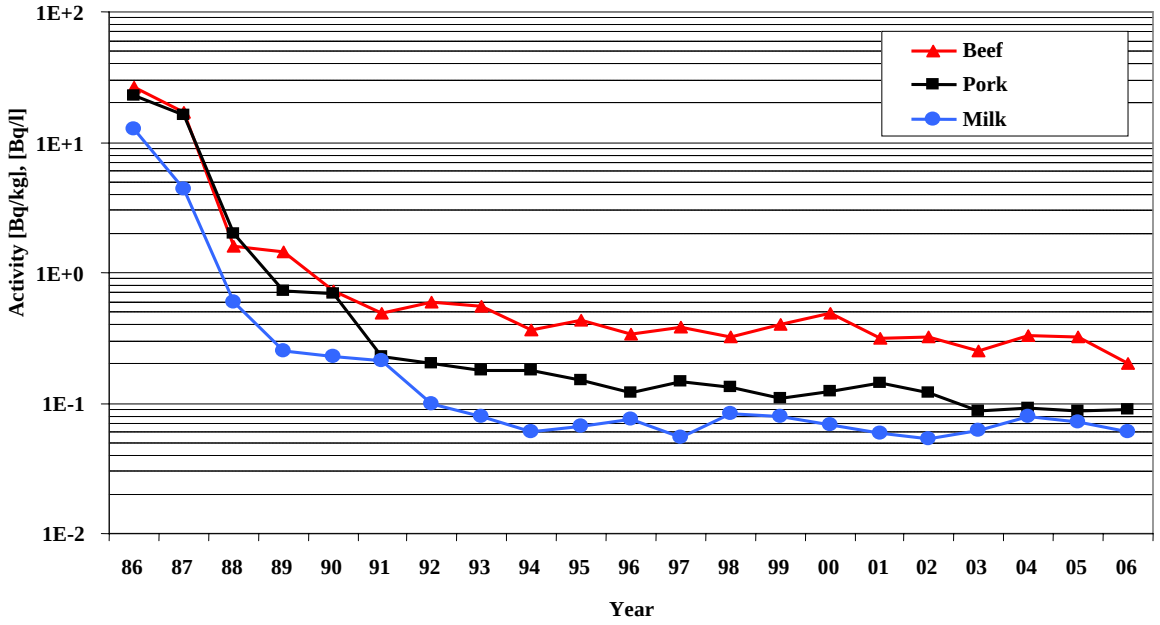


Figure No. 14 Development of ^{137}Cs content at Czech population after Chernobyl accident

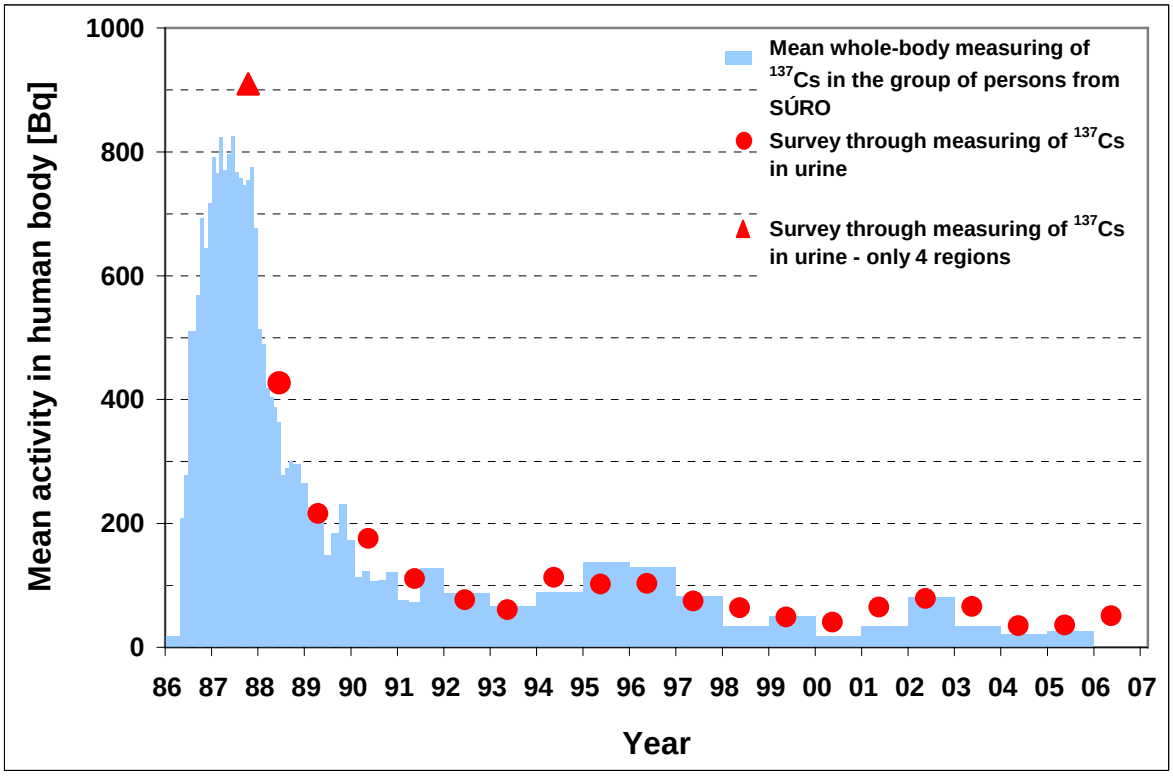


Figure No. 15 Total activity of ^{3}H discharged from Dukovany NPP in the year 2006 *(comparison of values measured by the SÚJB and operator's LRKO, sampling by Dukovany NPP, measuring by RC SÚJB in Brno and the LRKO at Dukovany NPP)*

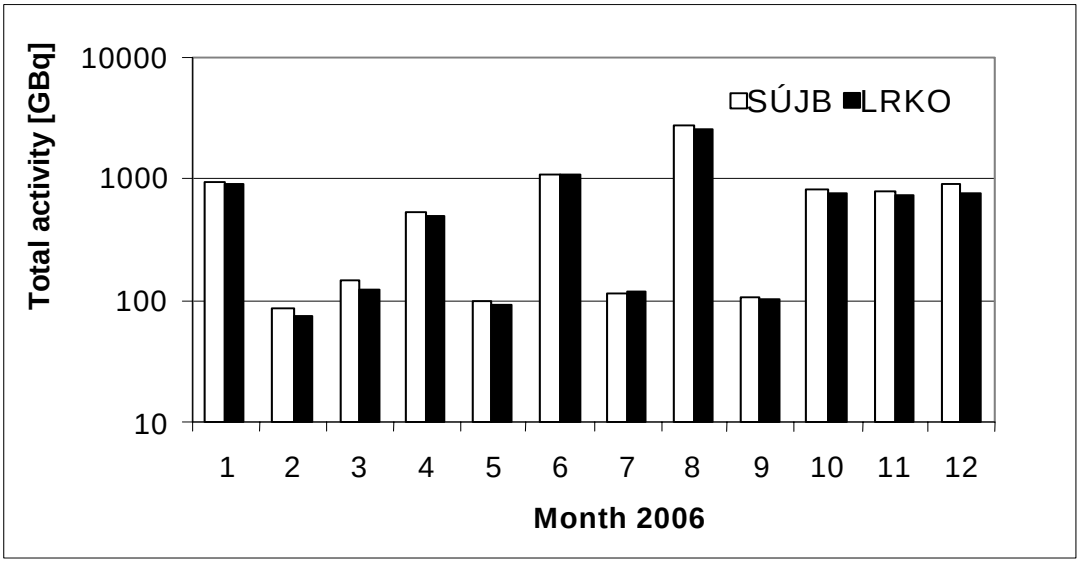


Figure No. 16 Activity concentration of ^{3}H in discharge channel at Dukovany NPP in the year 2006 *(comparison of values measured by the SÚJB and operator's LRKO, sampling by Dukovany NPP, measuring by RC SÚJB in Brno and the LRKO at Dukovany NPP)*

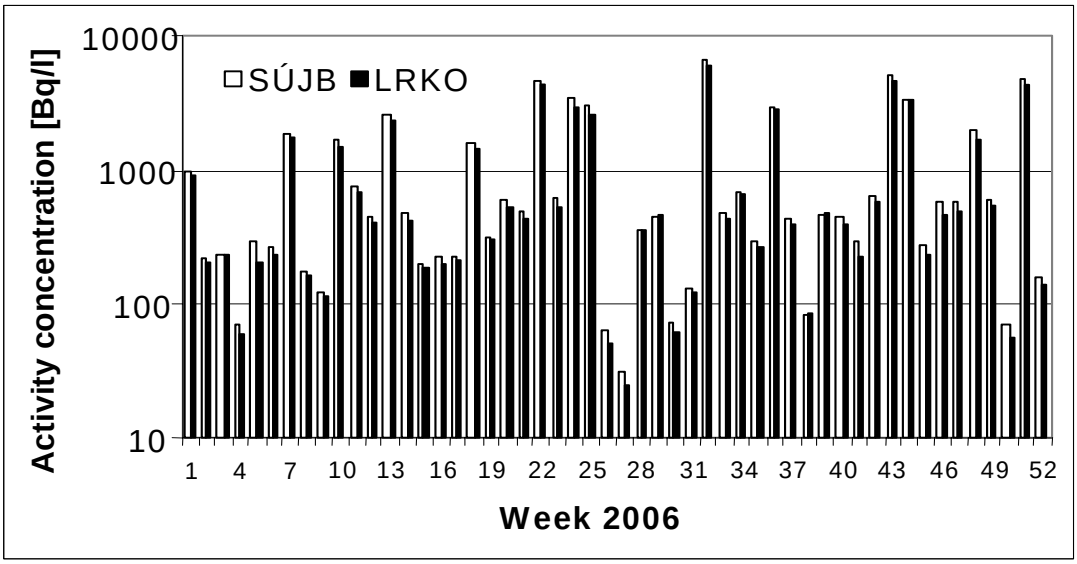


Figure No. 17 Total activity of ^{3}H discharged from Temelín NPP in the year 2006 *(comparison of values measured by the SÚJB and operator's LRKO, sampling by Temelín NPP, measuring by RC SÚJB in Brno and the LRKO at Temelín NPP)*

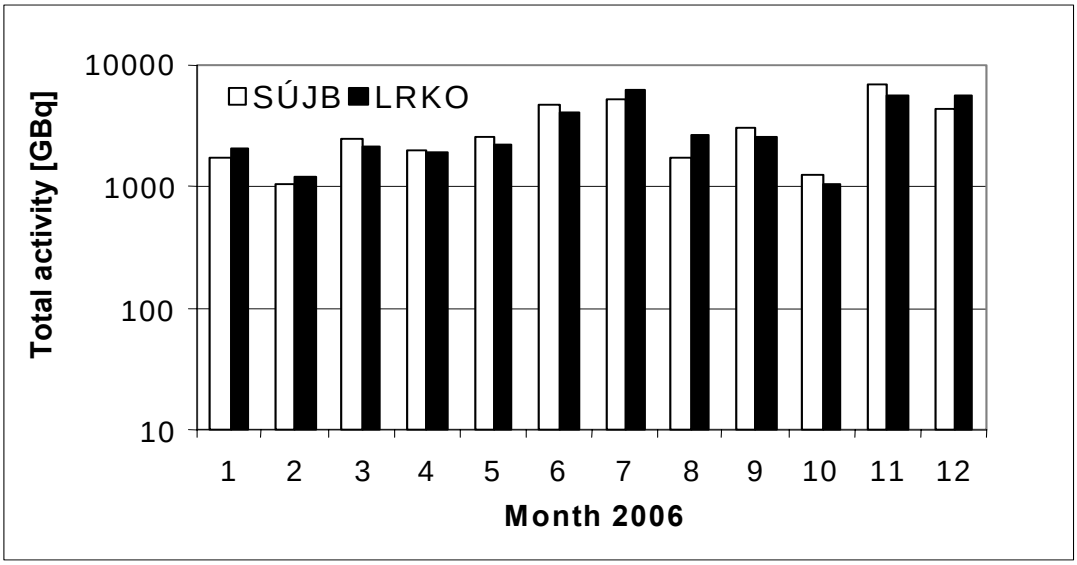


Figure No. 18 Activity concentration of ^{3}H in discharge channel at Temelín NPP in the year 2006 *(comparison of values measured by the SÚJB and operator's LRKO, sampling by Temelín NPP, measuring by RC SÚJB in Brno and the LRKO at Temelín NPP)*

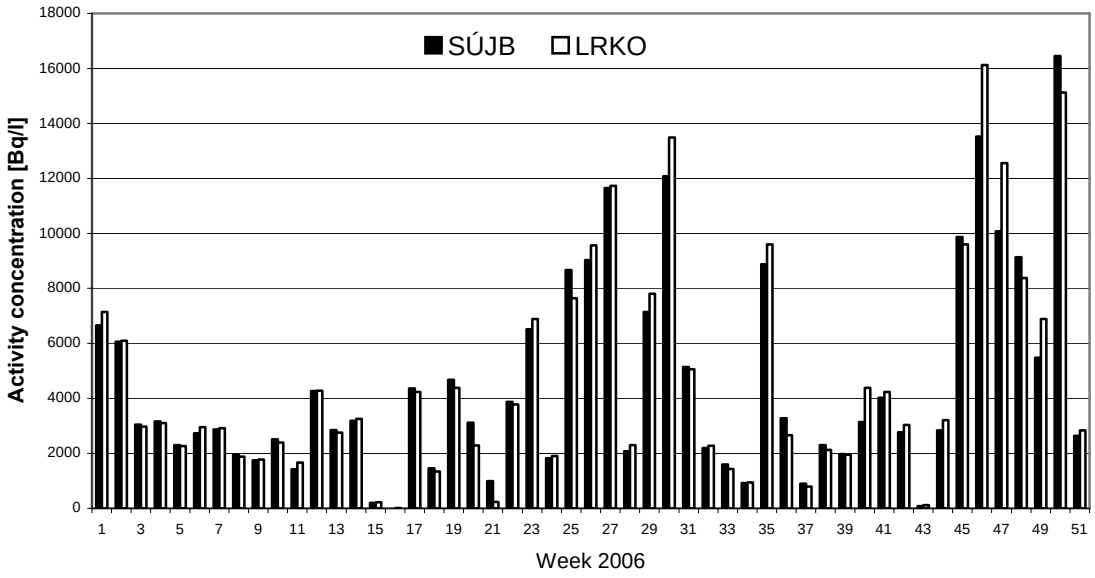
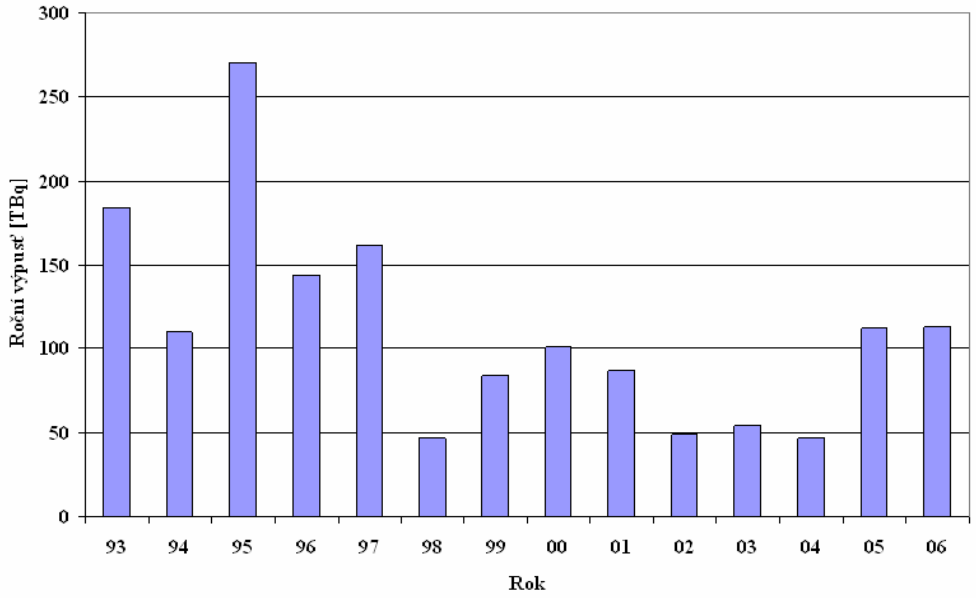
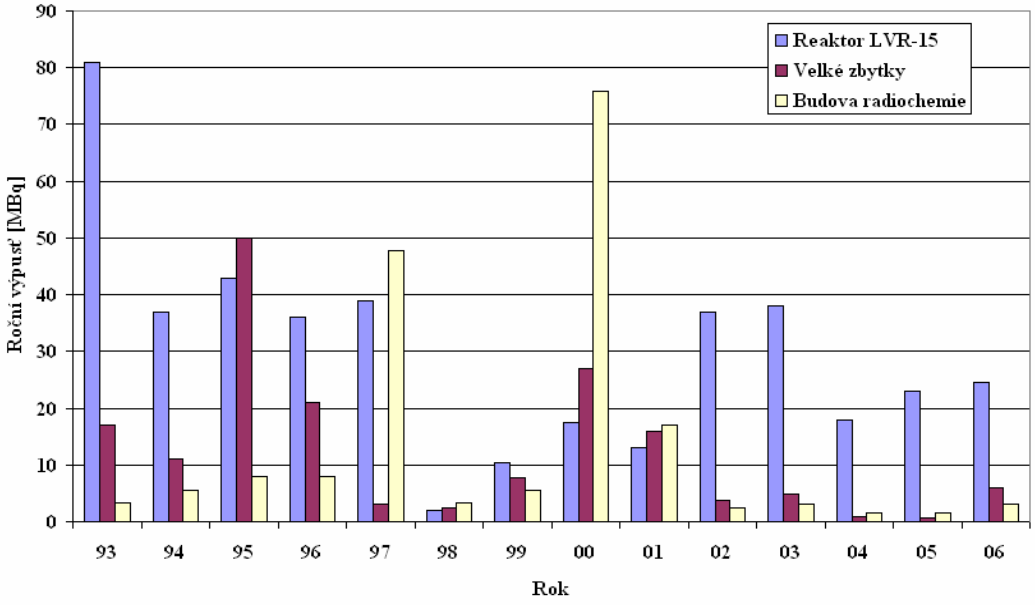


Figure No. 19a Aerial discharges – balance of noble gases (^{41}Ar) - sampling in ventilation stack at the Nuclear Research Institute Řež in the period 1993 - 2006 *(total annual activity limit amount to 1 000 [TBq])*



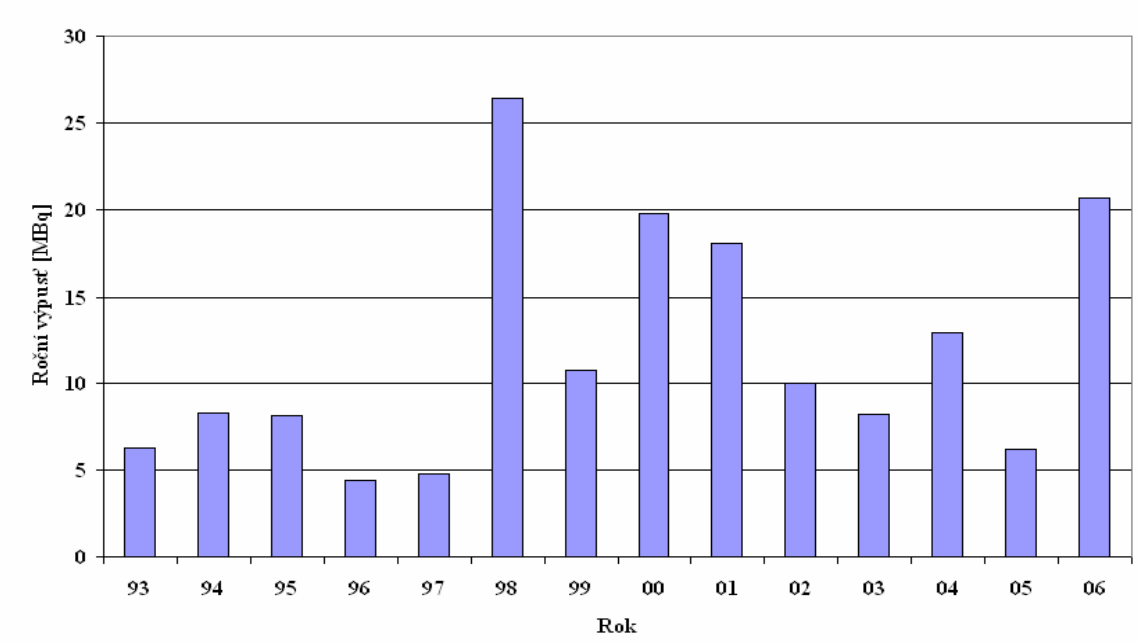
Legend:
Roční výpusť *Annual effluent*
Rok *Year*

Figure No. 19b Aerial discharges – balance of ^{131}I activity - sampling in ventilation stack at the Nuclear Research Institute Řež in the period 1993 – 2006 *(total annual activity limit amount to 20 000 [MBq])*



Legend:
Roční výpusť *Annual effluent*
Rok *Year*
Reaktor LVR-15 *LVR-15 reactor*
Velké zbytky *Large residues*
Budova radiochemie *Radiochemistry building*

Figure No. 19c Liquid discharges - sampling in purifying station at the Nuclear Research Institute Řež in the period 1993 – 2006 *(total activity beta converted to reference radionuclide ^{137}Cs, total annual activity limit amount to 2 200 [MBq])*



Legend:
Roční výpusť *Annual effluent*
Rok *Year*

Figure No. 20a Activity concentration of ^{137}Cs in aerial aerosols in samples taken at the stations in the vicinity and on the premises of Dukovany NPP *(sampling and measuring by the LRKO at Dukovany NPP)*

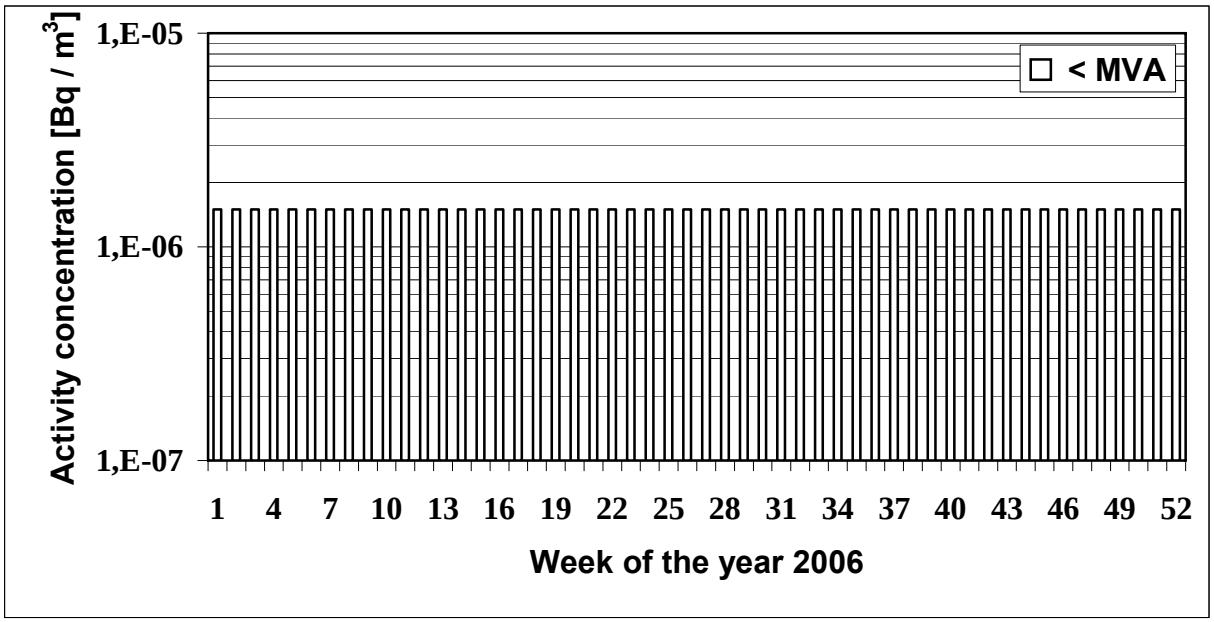


Figure No. 20b Activity concentration of ^{137}Cs in aerial aerosol in samples taken at the stations in the vicinity of Temelín NPP *(sampling and measuring by the LRKO at Temelín NPP)*

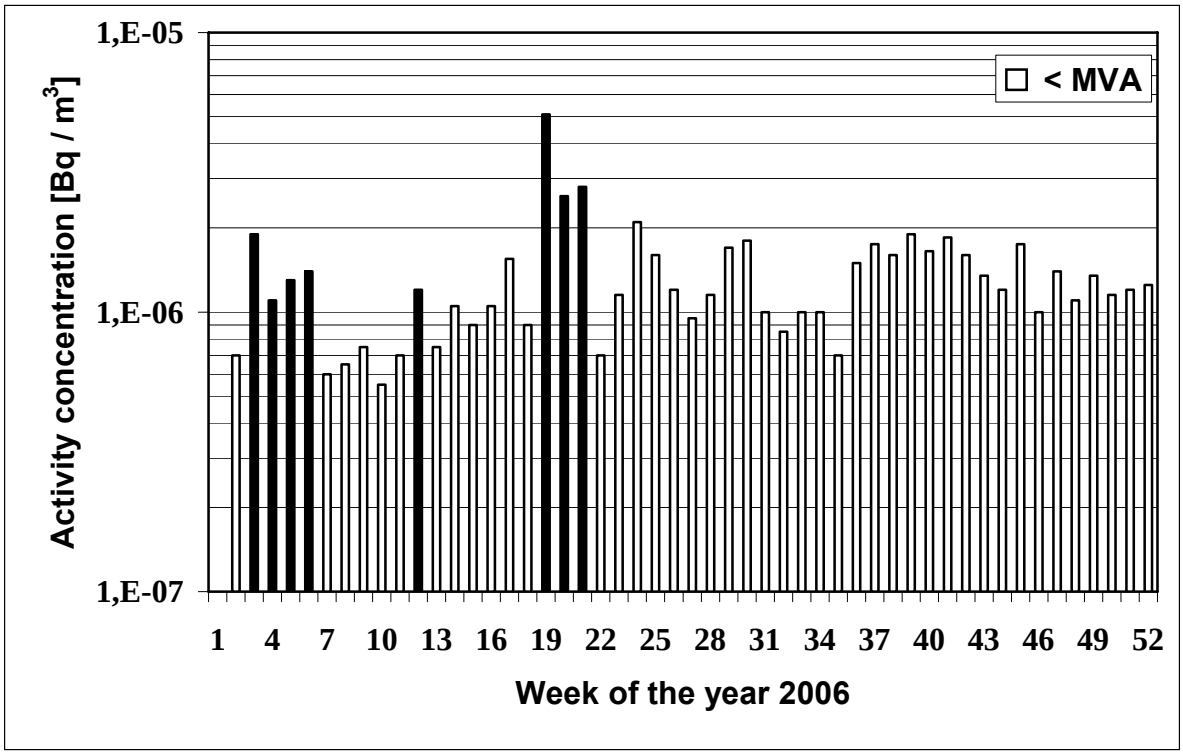


Figure No. 21 Activity concentration of ^{3}H in Jihlava river (profile Mohelno) and Vltava river (profile Újezd) in the year 2006 *(sampling by RC SÚJB in Brno and RC SÚJB in České Budějovice, measuring by RC SÚJB in Brno)*

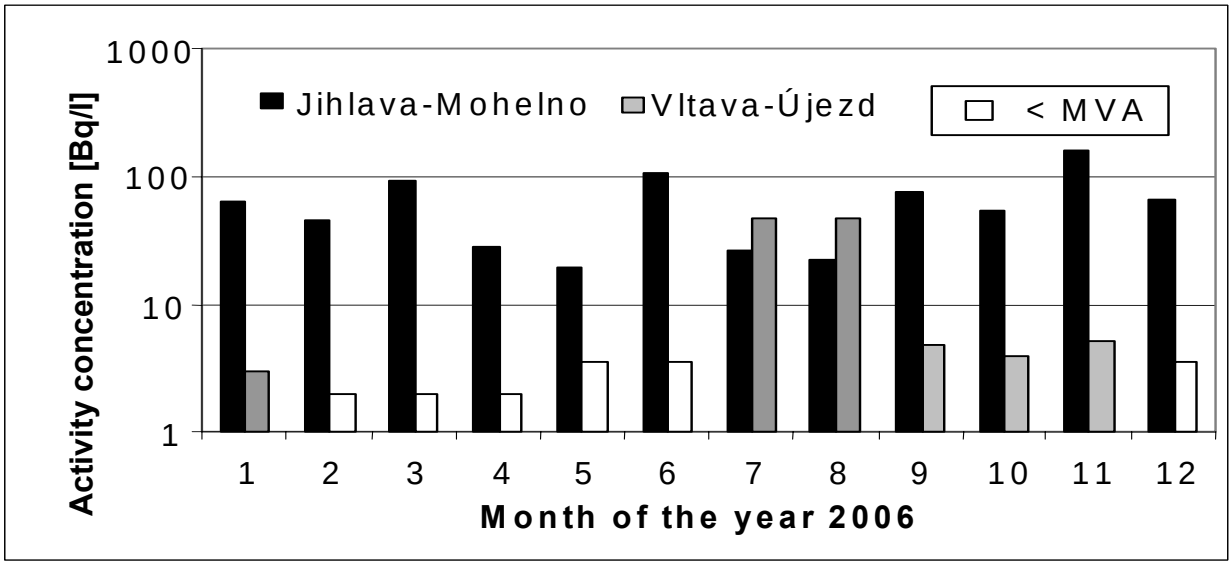


Figure No. 22 Surface activity of ^{137}Cs in fallouts in the vicinity of Dukovany NPP in the year 2006 *(monthly values in the individual locations, sampling by RC SÚJB in Brno, measuring by RC SÚJB in České Budějovice)*

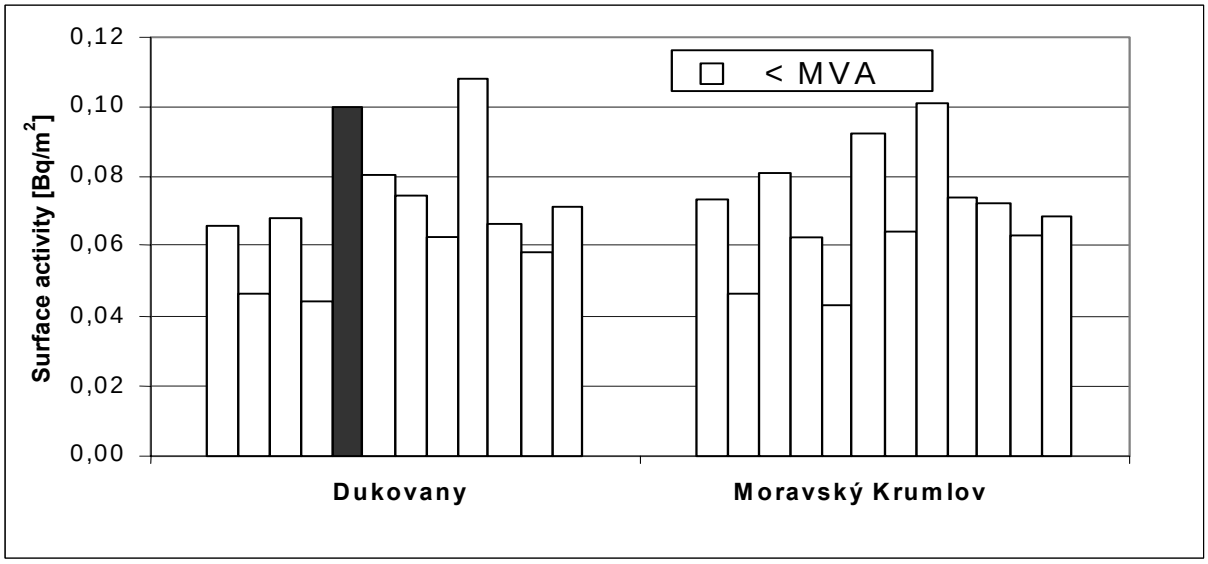
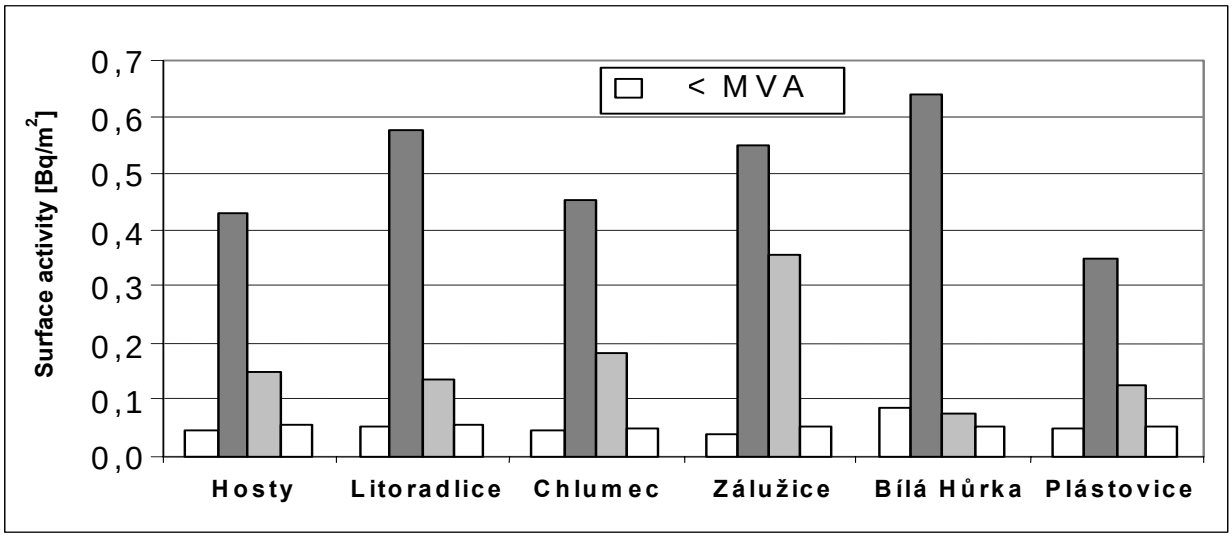



Figure No. 23 Surface activity of ^{137}Cs in fallouts in the vicinity of Temelín NPP in the year 2006 *(quarterly values in the individual locations, sampling and measuring by RC SÚJB in České Budějovice)*