

# **The New System of Radiation Protection of Itinerant Workers in the Czech Republic**

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## **Abstract**

The radiation protection of itinerant (called “outside” in EU directive and “external” in the Czech legislation) workers in the light of the new legislation adopted after the harmonisation with the EU directives in last two years in the Czech Republic is described. With respect to new legislation being in force from 2002, SÚJB is authorized to issue and register radiation passports. Forms of these passports, rules of the forms filling and verification of registered data are laid down in new special Decree of SONS No.419/2002 Coll. on personal radiation passports. The radiation passport consists of two parts, one part is permanent with the possibility of ten years dosimetric results registration and second part with detailed registration of annual doses will be changed every year. During 2003 SUJB has issued 2 050 personal radiation passports. The licensing process and requirements for undertakings and operators are described and the actual problems which raised during the implementation process are also identified. The recent status of the international recommendations as well as the necessity of the unified and clear approach on this field is also discussed.

## **Introduction**

In 2002, the Decree No. 419/2000 Coll. on personal radiation passport, defining the requirements for monitoring, evaluation and registration of exposure so called “external workers”, came into force. The Decree follows the principles of EU Directive No.90/641/EURATOM, which could be seen from some point of view as an extra requirements for radiation protection of this defined group of radiation workers. External workers are defined as a workers performing any kind of activities in controlled area operating by different licensee than the employer of the worker. The idea is to have a centralised on-line network enabling the control of summarised doses of any worker in any moment or to equip external workers with a personal document containing actual dosimetric data of worker.

The Czech Republic has developed the Central Register of Occupational Exposure (CROE) however it is not now working in on-line mode so it was decided to realise the idea of the system of personal radiation passport. The general requirements were introduced into the new Atomic Law in 2000 and the details are defined in the above mentioned Decree.

## **System description**

The development of the system of personal radiation passport was not easy and time consuming process mainly because the discussions with lawyers involved. It was difficult to explain them the principle of radiation passport in the frame of the radiation protection system. They had to understand why we want to force radiation protection only for one group of workers. The often and somehow logical question from their side was – “is there some gap in the recent system?” When they understood what is the aim of the radiation passport they requested to have a system with the full responsibility of SUJB as a state office – what means in the practice to respect the rules of any other official documents issued. With respect to this Decree 419 specifies personal data of worker which are necessary to send to SUJB with the official request for radiation passport. These data are introduced by SUJB into the issued passport. Each passport has own unique registration number. The distributed passports are registered in CROE and all changes has to be announced to SUJB. When worker finish

the employment, his passport must be returned to SUJB. When the same worker will start to work as external worker for another employer – he will receive the same passport and the history will continue.

The Czech radiation passport consists of two parts as was already mentioned. One contains the dose results for every month and will be changed every year. This part should be confirmed by radiation protection officer at the end of the calendar year and shall be sent to SUJB. All issued passports are registered in CROE. The results of the worker's monitoring confirmed in the passport are used for the approval of the annual doses of workers registered in CROE.

There is necessary to distinguish the cases when worker works as an employee for more than one employer from the cases when the worker category A is sent by his employer to perform certain activity for another licensee – operator of controlled area – only in this second case the worker has a status of external worker in accordance with the definition and he is equipped with the personal radiation passport.

The obligation to equip radiation workers with the personal radiation passport is in the Czech legislation, in reality as many other obligations, on the side of licensee - employer of external workers. The activity in controlled area could be performed in the Czech Republic only by the worker employed by the holder of the licence of SUJB. In the case when employer of external worker is not a licensee ( this case could happen when employer is not handling with a source of ionizing radiation but he is performing the services in controlled area) the radiation protection of external workers shall be assured in full extent by the operator of controlled area. It means, in fact, that operator of controlled area shall to categorize a worker as a category A, to equip him by the personal dosimeter, to control his qualification in radiation protection and health fitness and – in the relevant case – he should equip him also with the personal radiation passport. The best way is to include all this requirements into the contract signed between the employer and operator. Self employed workers shall equip with radiation passport themselves. The operator of controlled area has to control the radiation passports of external workers before they start to work in his controlled area.

The records in the personal radiation passport can be written only by the radiation protection officer of the employer. When the external worker changes the employer and he will continue to work as an external worker also in new employment – this fact is entered into the part A of the passport and part B is sent to SUJB. A new part B is sent back to employer. SUJB registers all issued passports, their loss, changes etc. SUJB introduce into the passport also the changes of the basic data as a numbers of personal documents or surname of women for example.

If the worker terminates the employment and he is continuing the work as an external worker for the moment – his complete passport is returned to SUJB where is archived. If worker starts sometimes in the future to work as external worker again he/she is equipped again with the same part A of the passport and with the actual new part B.

When the worker is sent to work as external worker abroad – he/she is equipped with the radiation passport by his employer. In the case he is working as self employed worker – he has to be equipped with the passport by himself.

### **Problems identification**

The following problems have been identified during the introduction of the passport into the practice:

The requirement of EU directive that the personal radiation document has to be issued and registered by the national authority determines that this documents are very official ones and their system has to follow the legislative requirements for these official documents – similar as personal and travel documents.

It is not so difficult to introduce the system of radiation passports into the nuclear power plants where the personal monitoring and the regime in controlled areas is very well organized, however there are

another more problematic areas as medicine and different kind of services performed in controlled areas – the operators here are not able very often to ensure adequate personal monitoring of possible external workers – mainly from the technical point of view but also from the point of view of financing.

There are also some practical problems of the system of radiation passports – the issue and distribution of passport could take some time – it could be limiting in some cases when worker is sent to perform an urgent work, the question is also where the passports should be stored during the work performance.

What could be seen as a one principal problem is the situation when the company is a licensee in more countries and its workers are going to perform the activities as an external workers to third country – who is responsible (which authority) for radiation passport issue, for dose summarization and control? The question arise also for the situation when the external worker is going to work to the country outside of European Union – where the passport should not be accepted. There could be appreciated the recent effort of IAEA to develop also a new technical recommendation on this field. In this context the co-operation on the international level could be very fruitful for all committed bodies.

## **Conclusions**

The system of personal radiation documents has been introduced into the practice in the Czech republic in accordance with the EU legislation. Some problems and incoherencies have been identified during the process of their development and it could be very useful and progressive to work out some more detailed recommendation for this purpose to ensure some necessary level of unification within the Europe. However we can see also the positive influence of this new system to the radiation protection. We noticed that during the introduction of the system into the practice the companies with the external workers had to be more interested in the recent radiation protection requirements, in many cases they went through the licensing process because they are forced by the operators of the controlled areas to have own license. Operators are taking the full radiation protection responsibility for external workers only exceptionally what is logical and understandable. Many meetings and discussions passed with all involved parties where a lot of problems in radiation protection not only connected with the radiation passports have been cleared.