# The First Nuclear Security Plan for Nuclear Medicine Departments in Serbia

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## INTRODUCTION

The new national legislation in Serbia envisages site security plan for a nuclear medicine facility. Although we have two years to to comply with regulations, as the largest nuclear medical institution in Serbia, we tried to implement the appropriate project as soon as possible. Probably due to the low risk, from a nuclear security point of view, relevant issues have not been addressed in the literature by now.

## SECURITY TARGETS

Radioactive sources in nuclear medicine are the second and primary third category sources, by both relevant approaches to categorization (activity coefficient or application). Primary security targets are I-131 and Lu-177 capsules for radionuclide therapy, with individual activity of around 7,4 GBq. Considering short half-life, $^{99m}Tc/^{99}Mo$, with activity in the range 10-30 GBq, brings less security danger. On the other hand, calibration phantoms with long half life and small dimensions, such as Cs-137, deserves attention, although their activities are in the range 5-200 MBq (adequate storage at the end of period of use in the Nuclear facilities of Serbia is mandatory).

## NEW LAW FOR R&N S&S

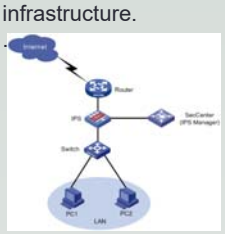
**Taking into account the definition of an incident by the International Atomic Energy Agency and our inciative, a new national legislation envisages security plan writing for a nuclear medicine facility.**


## SECURITY RISK ISSUES

The hospital environment is favorable for potential sabotage, and such activities, if successful, would, at the very least, lead to the cancellation of the clinical program and unwanted attention and image in the media.

## SECURITY OPTIMISATION

The imperative that is imposed is to achieve defense in depth and balanced protection, with small investment, considering primary nuclear security within the hospital - Gamma knife, as well as merging with other types of security, such as data and fire issues, sharing the infrastructure.



## SECURITY RESPONSE

What if the security system is triggered and there is reason to believe an incident is in effect? It is essential, after shortly confirming the necessity, to ensure adequate interaction with the police in order to respond promptly - a series of meetings were held with the police and a system was defined for their response to be professional - specially in sense of radioactivity, fast and efficient.

## CONCLUSION

This is the first approved and rounded security plan for nuclear medicine in Serbia.
Overall approach externally and internally raised the level of safety culture.


## REFERENCES

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