

Dear Dr. Alexandru Pavelescu

We are very pleased to inform you that your contribution *Alexandru Pavelescu, Carmen Tuca, Radu Deju*, "MODELLING OF A RADIOLOGICAL INCIDENT IN THE INTERMEDIARY STORAGE OF ACTIVATED WASTES FROM VVR-S NUCLEAR RESEARCH REACTOR DECOMMISSIONING" has been accepted for **oral presentation** at the Seventh International Conference on Radiation in Various Fields of Research (RAD 2019).

The mark of your contribution is: RAD7-5

Before the publishing of the Book of Abstracts, your abstract will be linguistically checked.

RAD 2019 Conference will take place at the Hunguest Hotel Sun Resort, Herceg Novi, Montenegro, from 10th to 14th of June, 2019. We hope that you will attend the Conference and present your contribution.

If you need an official confirmation letter (on the conference memorandum), please let us know so it could be prepared and sent to you.

We are looking forward to seeing you in Herceg Novi.

Best regards,
RAD 2019 Conference Secretariat
<http://rad2019.rad-conference.org/>
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Modelling of a radiological incident in the intermediary storage of activated wastes from VVR-S nuclear research reactor decommissioning

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Abstract. As an outcome of decommissioning of the VVR-S nuclear research reactor from IFIN-HH, Bucharest significant amount of graphite and aluminium low and medium level active waste have to be intermediary stored in a safety manner. Due to legal aspects rationales these wastes cannot be finally stored in the existing National Geological Repository. In this respect the former Spent Fuel Building, located in the Reactor vicinity, was chosen for long term storage of the activated thermal column graphite and reactor vessel aluminium components. Currently the spent fuel was removed and repatriated in Russian Federation, the fuel ponds were emptied and decontaminated for graphite storage. The aluminium is stored in dedicated stainless-steel containers located in the main hall of the same building. Despite all the implemented ALARA measures, there is a certain radiological risk for the workers and public due to potential ingestion of the radioactive aerosols released on 10 km radius from the storage building in an unexpected fire and/or explosion. For the assessment of the radioactive material atmospheric dispersion, dedicated calculation codes are used in order to insure a rapid interventional response (few hours). In our assessment we made use of Hot-Spot Health Physics code created by Lawrence Livermore National Laboratory (LLNL) which delivers results using a conservative deterministic approach. In case of the potential occurrence of a disruptive event a radiation dose intake and associated risks for workers and public members was estimated.

Key words: radiological incidents, dose intake, decommissioning, radioactive waste