

**Safety Officer – radioprotection specialist**  
*Within Extreme Light Infrastructure – Nuclear Physics (ELI-NP)*  
*research infrastructure*

**Job description and candidate's profile**

**Field of activity**

During the implementation phase, the Safety officer shall carry out activities within the radioprotection group to ensure the compliance with the legal requirements concerning radioprotection, in agreement with the applicable legislation and the existing specific authorisations and to prepare the documentation needed for obtaining the authorisation from CNCAN (National Commission for Nuclear Activities Control) for the future stages of implementation within ELI-NP Research Infrastructure.

During the exploitation phase, the Safety officer shall carry out activities within the radioprotection group to ensure the compliance with the radiological safety conditions within ELI-NP Research Infrastructure.

**Main responsibilities:**

- To ensure the implementation and compliance with the radioprotection norms and requirements upon installation, commissioning, operation, maintenance and repair of equipment such as preparation and carrying out of experiments;
- To ensure the compliance of activities within ELI-NP with the standards in the field;
- To ensure technical assistance on the radioprotection issues foreseen in the Technical Design Reports (TDR) related to the experiments during the implementation phase and to the carrying out of experiments during the operation phase.
- To collect data needed in terms of radioprotection to prepare the Initial decommissioning plan for radiological installations
- To archive the monthly and annual results of the dosimetry monitoring of the professionally exposed personnel, as well as the skill sheets concerning the workplace physician's opinions for working in ionizing radiation field of personnel working in the radiological installations
- To permanently optimise radioprotection and apply ALARA principle (maintaining at the lowest level possible the doses for the people professionally exposed, population and environment)

**Main tasks:**

- To ensure the documentation and implementation of these documents, to develop, commission and operationalise the ELI-NP dosimetry laboratory and to ensure its functionality in compliance with the legislation in force;
- To develop the ELI-NP radioprotection system, starting with calculations and simulations, estimations of personnel doses depending on the experimental setups and to implement the

measures needed to provide the safety of the personnel, approved by the Radiological Safety Committee;

- To draft the technical documentation in compliance with the national legislation in the field in view of obtaining the authorisations from CNCAN for the carrying out of nuclear related activities for various stages in the implementation of ELI-NP Project;
- To constantly follow up the implementation of the radioprotection elements to ionising radiations, non-ionising radiations and electrical and magnetic fields by the GBS (Gamma Beam System) manufacturers, in order to integrate them in the ELI-NP radioprotection system;
- To draft procedures within the Quality Management System that concern radioprotection;
- To draft the radioprotection program and the radiological protection manual which includes the related procedures (operational, emergency, contamination control, responsible with radiation sources and activation products, dosimetry of the personnel and area, interlock control systems, audits and program optimisations, air and effluents monitoring, radioactive waste management procedures, requests for the training of operators and technical personnel, warning devices, beam and working permits, records of users, maintenance, events, other records requested by means of authorisations;
- To draft, during the implementation phase of the Project, the structure of the ELI-NP radioprotection system meant to ensure operation under radiological safety conditions and take all actions needed for the functionality of the radioprotection system during operation;
- To organise training programs and obtain licenses to carry out nuclear activities for any field and specialty that will ensure the carrying out of activity in the nuclear field in agreement with the norms in force;
- To provide technical assistance in the field of radioprotection for the implementation and operation of the experiments described in the Technical Design Reports (TDR);
- To make sure that the documentation for the authorisation of the radioprotection elements are within the validity term and to take all necessary actions to renew them when applicable;
- To collaborate with the designers, engineers or research teams that need consultancy on radioprotection matters;
- To be involved actively and efficiently in the dialogue and communication with the ELI-NP team, with the Officers for Radiological Safety, The Radiological Safety Committee, the radioprotection experts and to promote a harmonious frames of collaboration and the security culture;
- To keep the documents received under the form they have been disseminated under;
- To keep the confidentiality of the information he/she becomes aware;
- To register in the quality records declared in the approved procedures, specific to the work unit, the results of the activities carried out, foreseen (planned or not planned) or unforeseen (works, events, visits, etc.) and to keep them in good conditions and hand them over annually to the archive;
- To identify landmarks, services, or processes that do not meet the specified requirements and inform the Radiological Safety Officer, the Technical Director.
- In charge with dosimetry monitoring of the personnel, keeping the monitoring records and the results evaluation;

- In charge with performing all activities by complying with the applicable radioprotection procedures;
- In charge with drafting and implementing the intervention plan in case of radiological emergencies.
- To ensure the record of activities using reports and registries with a format that has been pre-established by applicable procedures of the quality management system;
- To ensure the transfer of information on the status of works when performing the changing personnel working in shifts;
- To ensure the maintenance of the instrumentation installed so as to grant the functioning of the structures, systems, equipment and components within the limits specified.
- To check periodically the way in which measures on the installations safety insurance, the professionally exposed personnel and the surrounding area are applied;
- To check periodically the levels of the radiation fields, the concentrations of the airborne radioactivity and the radioactive contaminations in the working areas and in the surrounding area;
- To check periodically the individual dosimetry surveillance and the recording of individual dosimetry results for the professionally exposed personnel, visitors and external workers;
- To check periodically the placing of the warning means and their correct functioning and use;
- To check periodically the existence and functioning status of the fixed and portable dosimetry equipment and of the individual dosimetry equipment.

**Specific tasks in case of emergencies:**

- Has the obligation to work from home as member of the intervention teams in case of emergencies;
- Has the obligation to come to work as soon as possible in case a calamity (earthquake, flood, fire or air attack) or alarm exercises occur.

**Specific tasks in terms of radioprotection:**

- Performs periodically trains periodically the entire personnel working with radiation sources, at ELI-NP
- Proposes procedures and technical measures in agreement with the authorisation in force at ELI-NP to minimise the risk on those professionally exposed, the population and the environment.
- Controls the way in which the professionally exposed personnel complies with the safety and protection measures against ionising radiations, foreseen in the norms, in the authorisation released (including the annex documentation), in procedures and in the CNCAN provisions;
- Controls that the visits within ELI-NP are performed by complying with the proper radiological protection measures, ensuring the use of the protection equipment;
- Controls periodically the levels of the radiation fields, the concentration of the airborne radioactivity and the radioactive contaminations that exist in the working area, as well as the measures of the safety of installations, the functioning of the portable and fixed radiobiological equipment, the luminous and acoustic warning systems, the interlock

systems, the systems for monitoring gaseous effluents, the existence of the calibration certificates for the radiobiological equipment;

- Controls the correct use of the individual dosimetry system by all personnel;
- Controls every change of the working methods, machinery or installations within the radiological installation that might trigger the modification of risk level, exposure means and levels so that the change is not carried out without previously providing the necessary security measures.
- Controls the efficiency of the technology ventilation, fixed and mobile protection screens
- Keeps the record of the data obtained as a result of the check-ups performed, mentioned under the previous paragraph
- Provides the individual dosimetry surveillance and the record of the individual dosimetry results
- Immediately informs the Radiological Safety Officer and the Technical Director on any situation (including faults of the installations) that might trigger the risk of overexposures (internal-external) of the personnel or contaminations in the working area in view of ensuring the necessary prevention measures.

#### **Requirements for filling the position:**

- Higher long-term education in physics/engineering;
- Relevant experience in the field of radioprotection and radiological safety;
- Experience in designing and implementation of a radioprotection system within installations generating ionising radiations in compliance with the requirements of the legislation in the field;
- Experience in using the software instruments used in radioprotection projects (FLUKA, MCNP, etc. Calculation codes);
- Experience in using the dosimetry equipment used in the ionising radiations dosimetry;
- Fluency in English and interpersonal skills represent a prerequisite;
- Proven experience of team work and capacity to communicate and collaborate efficiently.

#### **Working arrangements/Conditions of employment:**

- Full-time position, based in Bucharest–Magurele, Romania.
- Included benefits: private medical coverage, paid annual leave;
- Motivating salary, at European level, based on qualifications and experience;
- Professional, multicultural and interdisciplinary work environment

#### **Applications:**

Applications shall be accompanied by the documents requested in the Rules of Selection for this position.

Applications shall be sent to the Human Resources Department at [human.resources@eli-np.ro](mailto:human.resources@eli-np.ro)