Job Description Print Report

Print Date:

Position Review

Position Number		Position Type		Subject to Radiation	yes	Subject to GD	
Hyperion Position Number		Fund Type	EBF	Parent Position	018673|Team Leader (SG-NDA Services)		
Organization	SGTS-NDA Services Team	FTE	1	CCOG 1	1B13		
Grade	P2	Duty Station	Vienna, Austria	CCOG 2			
Classified Grade		Position Title		Proposed New Title	Associate NDA Systems Engineer		
Master Version		Master Status		Approval Date			
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Job Description Review

Organization Settings

The Department of Safeguards is the organizational hub for the implementation of IAEA safeguards. The IAEA implements nuclear verification activities for some 180 States in accordance with their safeguards agreements. The safeguards activities are undertaken within a dynamic and technically challenging environment including advanced nuclear fuel cycle facilities and complemented by the political diversity of the countries.

The Department of Safeguards consists of six Divisions: three Operations Divisions: A, B and C, for the implementation of verification activities around the world; three Technical Divisions: Division of Concepts and Planning, Division of Information Management, and Division of Technical and Scientific Services; as well as three Offices: the Office for Verification in Iran, the Office of Safeguards Analytical Services and the Office of Information and Communication Services.

The Division of Technical and Scientific Services is responsible for nuclear and other measurement systems applied in verification activities, containment and surveillance techniques and all verification logistics.

The Section for Verification Technologies (TVT) is responsible for:

- In the areas of attended equipment, developing, supporting and continuously improving services to operations divisions through the creation of strong partnerships;
- Managing the full lifecycle of portable and resident attended systems from the initial identification of technologies to their full decommissioning;
- Providing field assistance associated with instrumentation used by inspectors in attended mode;
- Implementing the technology foresight function of identifying and evaluating advanced, emerging or novel, technologies suitable for IAEA safeguards;
- Managing the implementation of safeguards equipment related to complex facilities;
- Managing divisional processes relevant to systems engineering and project management

The Section comprises three specialized teams: Technology Engineering and Foresight, NDA Services and NDA Instruments.

Main Purpose

As a team member reporting to his designated supervisor within the NDA Services Team (NDAS), the Associate NDA Systems Engineer contributes to the technical production of the team through activities focussing on numerical simulations of radiation measurement systems. These equipment/systems include radiation detection technology with emphasis on gamma spectrometry, neutron coincidence counting, spent fuel assay, and other measurement techniques that have been deemed necessary to support the department.

Role

The Associate NDA Systems Engineer is a substantive contributor to the team, implementing attended Non-Destructive Assay system projects related to simulation of the application of radiation instruments/techniques. The NDA Simulation Engineer also develops and applies procedures and best practices meant to ensure unchallengeable quality of the simulation results.

Partnership

The Associate NDA Systems Engineer works closely with the staff of SG-TND Section providing support to other NDA experts on assigned tasks. Additionally, he/she acts as a technical point of contact for the Operation Divisions of the Safeguards Department, providing technical support to inspectors in the area of simulation of NDA systems as required.

Functions / Key results Expected

The Associate NDA Systems Engineer will contribute to the programmatic goal to provide technical support to the Department of Safeguards Operations staff. To do so, the following functions will be performed by the incumbent:

- To maintain and improve the methodology, tools and associated documentation related to the quality management of numerical simulations of NDA instruments.
- To apply the methodology in developing, validating and running calculations supporting the development, testing and calibration of selected NDA systems.
- To provide occasional field support for the validation of simulation results and deployment of NDA systems.
- To facilitate the implementation of the Quality Management System of the Department, review the technical procedures currently in use in the NDA area for compliance with the QMS guidelines, and suggest and introduce improvements in the area of simulation of NDA systems.

Competencies

Core Competencies

Competence	Occupational Role	Behavioural Indicator
Communication	Individual Contributor	Communicates orally and in writing in a clear, concise and impartial manner. Takes time to listen to and understand the perspectives of others and proposes solutions.

Achieving Results	Individual Contributor	Takes initiative in defining realistic outputs and clarifying roles, responsibilities and expected results in the context of the Department/Division's programme. Evaluates his/her results realistically, drawing conclusions from lessons learned.
Teamwork	Individual Contributor	Actively contributes to achieving team results. Supports team decisions.
Planning and Organizing	Individual Contributor	Plans and organizes his/her own work in support of achieving the team or Section's priorities. Takes into account potential changes and proposes contingency plans.

Functional Competencies

Competency	Occupational Role	Behavioural Indicator

Expertise

Expertise	Description	Asset
Safeguards | Non-destructive Assay	Expertise in the use of computerized simulation tools in support of development and implementation of Non-destructive assay instruments and methods, which are used in nuclear verification measurements.	N

Languages

Languages	Asset Languages
	Arabic Chinese French Russian Spanish

Qualification

Qualification Title	Description
Bachelor's Degree	University degree in nuclear engineering, applied physics, physics, mathematics, electrical engineering or computer science, or other relevant field.

Experience

- At least two years of work experience in use of computerized tools for the numerical simulation of NDA systems using the MCNP simulation code.
- Experiences in detection and characterization of nuclear and radioactive material and/or operation of nuclear facilities is an asset.
- Experience in developing, evaluating, and implementing various types of radiation detection equipment is an asset.
- Experience in working with radioactive sources is an asset.