

## Job Description Print Report

### Position Review

Position Number		Position Type		Subject to Radiation	Yes	Subject to GD	
Hyperion Position Number		Fund Type		Parent Position	007407 Team Leader (SG-NDA Services) 7		
Organization	SG-Section for Verification Technologies		1	CCOG 1	1J07		
Grade	P3	Duty Station	Vienna, Austria	CCOG 2			
Classified Grade		Position Title	Spectrometry Application Engineer (NDAS)	Proposed New Title			
Master Version		Master Status	Approved	Approval Date			
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### Job Description Review

#### Organization Settings

The Department of Safeguards (SG) is the organizational hub for the implementation of IAEA safeguards. The IAEA implements nuclear verification activities for over 180 States in accordance with their safeguards agreements. The main objective of the Department is to maintain and further develop an effective and efficient verification system in order to draw independent, impartial and timely safeguards conclusions, thus providing credible assurances to the international community that States are in compliance with their safeguards obligations. Safeguards activities are undertaken within a dynamic and technically complex environment including advanced nuclear fuel cycle facilities and complemented by the political and cultural diversity of the countries.

The Department of Safeguards consists of six Divisions: three Operations Divisions 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); and 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 (SGTS) is responsible for measurement systems applied in safeguards 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 Instruments and NDA Services.

The team for Non Destructive Assay Services (NDAS) concentrates on service and NDA methodological expertise including in-field service to divisions of operations through provision of direct expertise for ad-hoc and complicated NDA tasks and development of NDA instruments, methodologies and procedures. NDAS is also responsible for provision of related scientific expertise in support to the IAEA Safeguards.

**Main Purpose**

As a team member reporting to the Team Leader, the Spectrometry Application Engineer, provides professional expertise for the development and deployment of gamma spectrometric NDA systems in the context of safeguards verifications.

**Role**

The Spectrometry Application Engineer, is: (1) an engineer, adapting gamma spectrometry NDA systems for inspector use, (2) an IT specialist developing or managing outsourced software development contracts, and; (3) a technical writer, developing and updating development requirements for safeguards instrumentation, equipment specifications, equipment procedures and other reports.

**Partnership**

The Spectrometry Application Engineer, in close coordination with the Team Leader, engages inspectors from Operation Divisions and staff from other Teams in the Division of Technical and Scientific Services in addressing safeguards needs and reporting on deliveries. As a task officer, the Spectrometry Application Engineer, engages with technical counterparts in Member State Support Programmes (MSSPs) to initiate and coordinate MSSP tasks and contractors to manage contracted services.

**Functions / Key results Expected**

- Timely deliver requested support with respect to gamma spectrometric safeguards equipment, including documentation and reports.
- Provide expert assistance in the field for the deployment of new gamma spectrometric NDA instruments or other NDA measurements.
- Develop specific software applications in support of the introduction of the next generation of room temperature gamma spectrometric instrument.
- Manage the initiation and implementation of contracted software developments.
- Enhance the functionality of gamma spectrometric safeguards equipment through usability testing, maintenance and calibration.
- Prepare quality controlled technical documents, testing and calibration procedures for equipment, and trip reports that detail the deployment, repair, design or calibration of NDA instruments.

**Generic JD Remarks**

**Competencies**

Core Competencies		
Competency	Occupational Role	Definition
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	Definition
Judgement/decision making	Specialist	Consults with supervisor/manager and takes decisions in full compliance with the Agency's regulations and rules. Makes decisions reflecting best practice and professional theories and standards.
Resilience	Specialist	Maintains a high level of performance when facing pressure and uncertainty. Able to remain calm and self-controlled, and to respond logically and decisively in difficult situations.
Technical/scientific credibility	Specialist	Ensures that work is in compliance with internationally accepted professional standards and scientific methods. Provides scientifically/technically accepted information that is credible and reliable.
Expertise		
Expertise	Description	Asset
Operations and Inspections/Safeguards/Non-destructive Assay	Expertise supported by professional experience in the development or implementation of Non Destructive assay of radioactive substances, preferably nuclear material.	NO
Information Technology/Information Technology/Software Development	Expertise supported by professional experience in the development, design, production or use of data evaluation software applied to nuclear instrumentation	NO
Engineering/Nuclear Engineering/Simulation and Modelling	Expertise supported by professional experience in the use of computerized simulation tools for the transport radiation such as MCNP or GEANT	YES
Engineering Other Technical Engineering Mechanical Engineering	Expertise supported by experience in mechanical engineering or associated technologies such as Computer Assisted Design (CAD) tools	YES
Operations and Inspections Safeguards Nuclear Fuel Cycle/Nuclear Facilities	Broad knowledge of the nuclear fuel cycle and associated facilities	YES
Position Specific FC	Occupational Role	Definition
Position Specific Expertise	Description	Asset
Languages		
Languages	Asset Languages	

English	Arabic Chinese French Russian Spanish
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Qualification	
Qualification Title	Description
Bachelor's Degree	University degree in nuclear engineering, applied physics, physics, mathematics, computer science or electrical engineering.

Experience
<p>Required professional experience:</p> <p>At least 5 years of work experience in the development, deployment, production and/or use of nuclear NDA instrumentation including demonstrated experience in:</p> <ul style="list-style-type: none"> <li>o Designing, and developing data evaluation software applications preferably in the area of gamma spectrometry</li> </ul> <p>Desired professional experience:</p> <ul style="list-style-type: none"> <li>• Computerized radiation transport simulations, such as Monte Carlo simulations, applied to the design and calibration of NDA instruments.</li> <li>• Computer Assisted Design (CAD) tools.</li> </ul>

Job Description Remarks

Requisition							
Contract Type		Expected Start Date		Duration		Mobility	
Fully Competitive Recruitment			Travel				

Approval History				
Seq.	Name	Category	Status	Date