IAEA

Job Description Print Report

Position Review

Position Number		Position Type	CFE	Subject to Radiation	No	Subject to GD	No
Hyperion Position Number		Fund Type	EBR	Parent Position	007672|Team Leader (SG-Surveillance)		
Organization	SGTS TCS SUR Team	FTE	1	CCOG 1			
Grade	P5	Duty Station	Vienna, Austria	CCOG 2			
Classified Grade		Position Title	Senior Surveillance Systems Engineer	Proposed New Title			
Master Version	1	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 Containment and Surveillance (C&S) Section (TCS) comprises two teams (technical units): Security and Containment Systems (SCS) and Surveillance Systems (SUR). This Section acts as the Division's focal point for broad based support needed by the Operation Divisions in surveillance instrumentation data review, development and application of sealing, containment, surveillance as well as instrument security. The Section is also responsible for maintenance, enhancement and quality assurance of the divisional infrastructure (i.e. laboratories) related to C&S.

Main Purpose

Reporting to the Team Leader, the Surveillance Systems Engineer provides professional expertise for the analysis, development, and deployment of future surveillance systems for safeguards purpose. The incumbent develops and evaluates surveillance technologies, methods and techniques for unattended and remote applications. The incumbent further provides expert advice and assistance to the Operations Divisions on the use of surveillance data review tools and associated equipment.

Role

As a team member, reporting to the SUR Team Leader, the Surveillance Systems Engineer is:

(1) a technical expert, ensuring the efficient and effective implementation of advanced video analysis tools;
(2) an implementer, installing and verifying surveillance systems and techniques, as well as providing relevant training to users;
(3) a project manager, leading and coordinating development activities and tasks for SG surveillance technology and related Member State Support Programmes tasks;
(4) a technical writer, drafting and updating development requirements for safeguards surveillance instrumentation, equipment specifications, equipment procedures and other reports.

Partnership

The Surveillance Systems Engineer establishes relationships with staff throughout the IAEA to provide expert advice and assistance in the development and implementation of surveillance systems and related data analysis techniques, and with other departmental specialists and customers to consult and coordinate on specific cases. Furthermore, The incumbent liaises with MSSPs, R&D laboratories/organizations and commercial partners on new developments, vulnerability reviews/assessments and qualification of safeguards equipment.

Functions / Key results Expected

- Coordinate, plan and organize the work, focusing on priorities and driving for excellence in line with the IAEA's quality management and results-based programming approach.
- Ensure field implementation of surveillance video review and analysis tools and associated equipment, including configuration, laboratory evaluation and testing of surveillance system performance during implementation. Ensure quality control on all aspects of system video data for safeguards purposes.
- Provide expert input and act as project manager for the task of defining and selecting SG surveillance technology eventually replacing the currently used NGSS.
- Develop, analyze and evaluate new or enhanced surveillance technology. Report on the findings.
- Plan and implement effective software management architectures in support of software quality assurance (SQA) practices, including planned regression testing in support of evolving operating systems on target platforms and development of structured upgrade procedures for analysis tool updates and upgrades in the field.
- Provide advice on selection and procurement of appropriate surveillance equipment.
- Provide technical advice and expertise to the Operations Divisions (including assistance in the compilation of needs, planning and conducting field tests, reporting test results, providing field support during inspections and providing equipment training as required and drafting of operating procedures).
- Provide oversight and coordination of consultants and staff on project related activities.

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
Client orientation	Specialist	Helps clients to analyse their needs. Seeks to understand service needs from the client's perspective and ensure that the client's standards are met.
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.
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
Safeguards	Containment and Surveillance	Expert technical knowledge required to evaluate new and emerging surveillance systems based on optical and non-optical sensor technology.	N
Management and Programme Analysis	Project Management	Demonstrated expertise in Project Management (PM), and the use of PM tools. Familiarity with formal project management principles as described by PRINCE2, PMI or equivalent formal project management methodology required, and certification is an asset.	N
Safeguards	Quality Management	Knowledge of the principles of Quality Management is required, and experience in working with a Quality Management System is an asset.	N
Other Technical Engineering	Engineering and Technology	Expert knowledge in the development and implementation of machine vision techniques for surveillance data analysis.	N
Safeguards	Safeguards System, Basic	Familiarity with the concepts of IAEA safeguards.	Y

Position Specific FC	Occupational Role	Definition

Position Specific Expertise	Description	Asset

Languages

Languages	Asset Languages
English	Arabic Chinese French Russian Spanish

Qualification	
Qualification Title	Description
Master's Degree	Advanced university degree in physics, engineering, or other related technical field. An undergraduate degree in physics, engineering, or other related technical field with 4 years of additional relevant work experience may be considered in lieu of the advanced degree.

Experience

At least 10 years of work experience in surveillance technologies, video signal processing, software engineering or other relevant field. Demonstrated experience with the implementation of surveillance systems and image processing and analysis techniques.
Demonstrated knowledge of current and emerging surveillance technologies and image signal processing technologies and techniques used in machine vision.
Demonstrated experience in project management methods and tools (e.g. PRINCE2).
Experience with related US DoE and USSP research and development projects is an asset.
Experience with the application of surveillance for the specific purpose of nuclear safeguards is an asset.