



Job Description

Associate NDA Systems Engineer (NDAI)(P2) - (2018/0280 (179391))

Organization SGTs-NDA Instruments Team

Primary Location Austria-Vienna-Vienna-IAEA Headquarters

Posting Date 2018-04-23, 10:03:54 AM

Closing Date 2018-06-04, 11:59:00 PM

Duration in Months: 36

Contract Type: Fixed Term - Regular

Probation Period: 1 Year

Organizational Setting

The Department of Safeguards (SG) 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 (SGTS) is the departmental branch for nuclear and other measurement systems applied in verification activities, containment and surveillance techniques and all verification logistics. Within the Department of Safeguards, the Division of Technical Support is responsible for the development and implementation of the Department's equipment systems. The Section for Non-Destructive Assay (NDA) Section is responsible for the development, testing, commissioning and provision of equipment for non-destructive assay of nuclear materials; the development, implementation and maintenance of respective methodologies to be applied by SG inspectors; the provision of relevant training and/or expertise through direct participation in field measurements; and providing relative methodological support to the section of unattended systems and other users.

Main Purpose

As a team member reporting to the Team Leader of the NDA Instruments Team, the Associate NDA Systems Engineer execute selected projects related to the development, testing, authorization and deployment of NDA systems including preparation of the related technical documentation.

Role

The Associate NDA Systems Engineer is: (1) an engineer, conducting experiments, testing and validations of NDA instrumentation for safeguards verification, (2) a Non Destructive Assay practitioner, supporting the process of delivery of SG equipment at IAEA headquarters and deployment in the field of NDA systems, and; (3) a technical writer, preparing documentation such as user requirements for safeguards instrumentation, equipment specifications, test report, operational procedures and other reports.

Functions / Key Results Expected

Contribute to the design, development and implementation of NDA instruments including gamma spectrometry, neutron coincidence counting, Cerenkov light viewing techniques and other measurement devices by:

- Performing usability tests and performance evaluations of specific NDA instruments.
- Preparing quality controlled documentation to support authorization of the NDA systems including reports on the development, testing and evaluation work.
- Developing operational documentation for field use of NDA systems such as user or maintenance manuals, calibration procedures, and procurement specifications.
- Carrying out field activities such as installing, testing, calibrating and/or maintaining NDA systems for the verification of nuclear material.

The incumbent may perform his/her work in areas involving exposure to radioactive materials. Therefore, as an Occupationally Exposed Worker, he/she must be medically cleared by VIC Medical Service and is subject to an appropriate radiation and health monitoring programme, in accordance with the IAEA's Radiation Safety Regulations.

Competencies and Expertise

Core Competencies

Name	Definition
Planning and Organizing	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.
Communication	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	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	Actively contributes to achieving team results. Supports team decisions.

Functional Competencies

Name	Definition
Judgement/decision making	Consults with supervisor/manager and makes decisions in full compliance with the Agency's regulations and rules.
Partnership building	Develops and maintains partnerships needed for his/her work. Establishes and nurtures positive relations with partners and stakeholders.
Technical/scientific credibility	Acquires and applies new skills to remain up to date in his/her area of expertise. Reliably applies knowledge of basic technical/scientific methods and concepts.

Required Expertise

Function	Name	Expertise Description
Safeguards	Non-destructive Assay	Expertise in the Non-destructive assay instruments and methods which are used in nuclear verification measurements.

Qualifications, Experience and Language skills

- Bachelor's Degree - University degree in Nuclear Engineering, Applied Physics, Physics, Mathematics, Electrical Engineering or Computer Science, or other relevant field.
- At least 2 years of work experience in the development, deployment, production and/or use of NDA instrumentation based on radiation detection.

- Experience in NDA applied to the characterization of fissionable nuclear material an asset;
- Experience in mechanical engineering or programming an asset.
- Experience in project management an asset.
- Experience in using computerized radiation transport simulations, such as Monte Carlo simulations applied to the design and calibration of NDA instruments an asset.
- Knowledge of other official IAEA languages (Arabic, Chinese, French, Russian and Spanish) is an asset.

Remuneration

The IAEA offers an attractive remuneration package including a tax-free annual net base salary starting at **US \$46472** (subject to mandatory deductions for pension contributions and health insurance), a variable [post adjustment](#) which currently amounts to **US \$ 24491***, dependency benefits, [rental subsidy](#), [education grant](#), [relocation](#) and [repatriation expenses](#); 6 weeks' annual vacation, [home leave](#), [pension plan](#) and [health insurance](#)

Applications from qualified women and candidates from developing countries are encouraged

Applicants should be aware that IAEA staff members are international civil servants and may not accept instructions from any other authority. The IAEA is committed to applying the highest ethical standards in carrying out its mandate. As part of the United Nations common system, the IAEA subscribes to the following core ethical standards (or values): [Integrity](#), [Professionalism](#) and [Respect for diversity](#). Staff members may be assigned to any location. The IAEA retains the discretion not to make any appointment to this vacancy, to make an appointment at a lower grade or with a different contract type, or to make an appointment with a modified job description or for shorter duration than indicated above. Testing may be part of the recruitment process
