Statistician (P3) - (2021/0356 (005647))

**Organization:** SGAS-Quality Management Team  
**Primary Location:** Austria-Lower Austria-Seibersdorf-IAEA Laboratories in Seibersdorf  
**Job Posting:** 2021-12-14, 5:45:30 PM  
**Closing Date:** 2022-01-31, 11:59:00 PM  
**Duration in Months:** 36  
**Contract Type:** Fixed Term - Regular  
**Probation Period:** 1 Year

This is a re-opening of the vacancy. Candidates who already applied do not need to re-submit an application.

**Organizational Setting**

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 Office of Safeguards Analytical Services (SGAS) is responsible for the analysis of nuclear material and environmental swipe samples, as well as the coordination of logistics and the Network of Analytical Laboratories (NWAL). Located about 45 km south of Vienna in Seibersdorf, the Office is organized into three sections: the Nuclear Material Laboratory, including the On-Site Laboratory (OSL) in Japan, the Environmental Sample Laboratory and the Coordination and Support Section.

The Coordination and Support Section is responsible for the planning and coordination, and reporting of analytical services, as well as coordination of the NWAL, quality management and technical support (including logistics of sample shipment, IT support, the mechanical workshop, and laboratory engineering support).

**Main Purpose**

Reporting to the Team Leader, the Statistician is responsible for the application of appropriate statistical tools in support of the SGAS mission. This includes the effective and efficient assessment of quality of analytical results produced by the NWAL, including the Safeguards Analytical Laboratories. The Statistician advises SGAS management and laboratory staff on statistical methodologies and best practices regarding estimation of measurement uncertainty, development of quality control charts, and method validation, and is responsible for the design, implementation, evaluation, reporting and consolidation of results of appropriate proficiency tests and inter-laboratory comparisons of the NWAL.

**Role**

The Statistician is: 1) an expert supporting the design of the NWAL quality assurance / quality control (QA/QC) programmes based on sound statistical methodologies and compliant with international standards and International Target Values, 2) a technical specialist supporting the statistical analysis of data produced by NWAL by implementation of statistical models, evaluation, reporting and consolidation of quality assurance results, 3) an advisor on maintaining a high proficiency of analytical services in the NWAL, and 4) a focal point for statistics-related issues within SGAS in general and specifically for the laboratories.
Functions / Key Results Expected

- Design, implement, evaluate and report on the results of appropriate quality assurance measures (such as proficiency tests) to demonstrate satisfactory performance of the NWAL.
- Consolidate results and perform meta-analysis of proficiency tests and other quality assurance measures, to aid in planning of the safeguards sample analysis QA/QC programme.
- Develop and maintain quality control charting applications in the Nuclear Material and Environmental Sample Laboratories, review and update the QC charts using appropriate statistical tools.
- Provide guidance on statistical measures required to improve quality of sample analysis (e.g. methodology for determination of uncertainty budgets, experimental design for method validation).
- Monitor the quality of analytical results provided by the NWAL.

Competencies and Expertise

Core Competencies

<table>
<thead>
<tr>
<th>Name</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Planning and Organizing</td>
<td>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.</td>
</tr>
<tr>
<td>Communication</td>
<td>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.</td>
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<tr>
<td>Achieving Results</td>
<td>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.</td>
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<tr>
<td>Teamwork</td>
<td>Actively contributes to achieving team results. Supports team decisions.</td>
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Functional Competencies

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<tbody>
<tr>
<td>Analytical thinking</td>
<td>Analyses information to identify cause and effect relationships and correlations. Identifies critical elements and assesses consequences of different courses of action and proposes solutions.</td>
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<tr>
<td>Commitment to continuous process improvement</td>
<td>Plans and executes activities in the context of quality and risk management and identifies opportunities for process, system and structural improvement, as well as improving current practices. Analyses processes and procedures, and proposes improvements.</td>
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<tr>
<td>Judgement/decision making</td>
<td>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.</td>
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Required Expertise

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<tr>
<th>Function</th>
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<th>Expertise Description</th>
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<tbody>
<tr>
<td>Information Technology</td>
<td>Data Analysis</td>
<td>In depth knowledge and experience with the R statistical programming language.</td>
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Safeguards

Quality Management of Analytical Measurement

Experience with use of statistics in quality management context (e.g. ISO 9001, ISO 17025) and with statistical topics covered in international standards 5725, 7870, 13528 and JCGM 100.

Safeguards

Uncertainty Quantification

Experience with the use of the GUM approach to estimate measurement uncertainty as well as methods to estimate detection limits.

Asset Expertise

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Chemistry</td>
<td>Analytical Chemistry</td>
<td>Experience working in chemometrics, analytical chemistry is desirable. Experience working with data from analytical techniques for characterization of solids in mass spectrometry is desirable.</td>
</tr>
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Qualifications, Experience and Language skills

- University degree in statistics or a related discipline.
- Minimum of five years of working experience in applied statistics, preferably in a laboratory environment.
- Experience with international safeguards and international organizations an asset.
- Advanced university degree in statistics or a related discipline would be an asset.
- Excellent oral and written command of English. 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 $62120 (subject to mandatory deductions for pension contributions and health insurance), a variable post adjustment which currently amounts to US $ 32613*, 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.

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APPLY HERE!