



Atoms for Peace

الوكالة الدولية للطاقة الذرية  
国际原子能机构  
International Atomic Energy Agency  
Agence internationale de l'énergie atomique  
Международное агентство по атомной энергии  
Organismo Internacional de Energía Atómica

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Ms Barbara Hoffheins

US SP Coordinator  
US Mission to International Organizations  
in Vienna (UNVIE)  
Wagramer Strasse 17 -19  
1220 VIENNA  
AUSTRIA

In reply please refer to: M2.05-USA  
Dial directly to extension: (+431) 2600-

2015-08-14

Dear Ms Hoffheins,

With reference to the US Support Programme, I am pleased to provide the attached new cost-free expert task proposal with a copy of the relevant job description for your consideration.

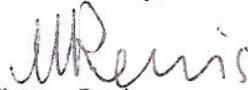
The Department of Safeguards would appreciate the nomination of more than one candidate. This will allow the Department to perform an evaluation of candidates that will result in the most suitable candidate being selected for the task. To ensure that this process proceeds on a timely basis, I have submitted the proposal below along with a closing date for nominations and expected start date. Also, in order to facilitate the selection process, I would like to ask you to send, together with the nominations, the candidates' Curricula Vitae and IAEA Personal History Forms. All information will, of course, be treated as confidential.

SP-1 Number	Title	Expected Start Date	Closing Date for Nominations
15/ISF-002	Expert – NFC Technology Expert	As soon as possible	As soon as possible

I will inform you of the result of the evaluation as soon as a decision is made. The Support Programme Coordination Team will liaise with the Division of Human Resources to complete the recruitment process for the successful candidate.

I would also like to take this opportunity to express the appreciation of the IAEA for the valuable contribution provided by the US Support Programme to the IAEA's safeguards efforts.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Therese Renis', written in a cursive style.

Therese Renis

Director

Division of Concepts and Planning

Department of Safeguards

Enclosures

# Job Description for Professional Posts

<b>Position and Grade:</b>	NFC Technology Expert – (15/ISF-002)
<b>Organizational Unit:</b>	State Factor Analysis Section Division of Information Management Department of Safeguards
<b>Duty Station:</b>	Vienna
<b>Type/Duration of Appointment:</b>	Cost-Free Expert/2-year Minimum

## Organizational Setting

The Department of Safeguards is the organizational hub for the implementation of IAEA safeguards. The IAEA implements nuclear verification activities for more than 160 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 Division of Information Management (SGIM) comprises four sections and provides the Department of Safeguards with services of data processing, secure information distribution, information analysis and knowledge generation necessary to draw independent, impartial and credible safeguards conclusions.

Within SGIM, the State Factor Analysis Section (ISF) is responsible for the analysis and exploitation of commercial satellite imagery and the provision of in-depth technical appraisals of nuclear sites and facilities. Analysts in ISI collect, process, and exploit information in support of both inspection-related activities and the Department-wide State evaluation process. ISI's product line includes site-focused satellite imagery analysis reports, imagery-derived maps and geospatial information, and technical assessments.

## Main Purpose

The Senior Technology Analyst leverages his/her broad understanding of the various aspects of sciences and technologies to deepen the IAEA's understanding of nuclear proliferation concerns related to both indigenous R&D and technology transfer and international trade. He/she provides expertise in these fields, analyses related information and advises on verification of nuclear proliferation issues related to his/her expertise.

## Role

The Senior Technology Analyst is (1) an *expert* in non-proliferation sciences and related technologies; (2) a *key contributor* in the preparation and review of State evaluation reports as both senior technical expert and information analyst; (3) an *adviser* to senior levels for consultations and investigations arising from ad hoc requests generated from headquarters and in-field; (4) a *liaison*, as appropriate,

with representatives of other safeguards divisions, IAEA departments and Member States on issues of his/her expertise; and (5) a *technical expert* in providing safeguards training with the provision of course material and presentations.

## **Partnerships**

The Senior Technology Analyst participates in teamwork on a daily basis with other Section, Division and Department members to contribute to all kinds of safeguards-related evaluations; advises senior management on broad-perspective analysis of non-proliferation concerns; communicates with counterpart experts from Member States, organizations or the industry to assess sensitive factual information; cooperates with and provides advice and guidance to staff of the Department of Safeguards by coordinating and/or participating in defining analysis goals, setting priorities and evaluating task requests; and cooperates with the staff of the Department of Safeguards and other IAEA departments with respect to verification activities and to improve awareness of proliferation concerns.

## **Functions / Key Results Expected**

The Senior Technology Analyst contributes essential expertise in specialized sensitive nuclear and non-proliferation related sciences and technology to:

- Prepare/review State evaluation reports and in departmental working groups, prepare reports and advise on technology issues, as required;
- Further develop analysis approaches and methods related to promoting early detection of the possible misuse of nuclear material or technology through undeclared nuclear activities or related trade and activities of sensitive nuclear technologies;
- Guide, review and evaluate the work with technical consultants on specific analytical and development projects, including the Department of Safeguards R&D programme and the IAEA's support projects, and coordinate/participate in preparing reports;
- Plan, implement and report on verification activities at headquarters and in the field, when appropriate; and
- Provide authoritative technical expertise and advice concerning nuclear proliferation issues and investigations on sensitive sciences and technology related research and development activities.

## **Knowledge, Skills and Abilities**

- Professional expertise:
  - Broad knowledge of substantial elements of the nuclear fuel cycle and specific knowledge of sciences and technology related to his/her area of expertise;
  - Broad knowledge of the relevant processes, materials, components and equipment that are possible indicators of the contribution of activities and facilities to such field;
- Extensive technical knowledge of nuclear proliferation issues; and
- Some knowledge of nuclear or dual-use export/import controls, customs or law enforcement activities.

- Analytical skills: Demonstrated capabilities to identify and analyse links between activities, facilities and technology transfers that may raise proliferation concerns.
- Strong interpersonal skills: (i) to establish and maintain good relationships with internal and external counterparts and to work harmoniously in a multicultural/multidisciplinary environment with respect and sensitivity for diversity; (ii) to participate effectively in and lead teamwork; and (iii) to act with tact and diplomacy in dealing with Member States.
- Strong planning and organizing skills to set clearly defined objectives, plan activities in a timely way and monitor performance against deadlines and milestones; ability and willingness to demonstrate initiative, to take decisions and to work independently.
- Learning attitude: Ability and willingness to keep abreast of technological developments and to share knowledge.
- Confidentiality: Strong sense of confidentiality to handle sensitive information while still contributing to a collaborative analytical environment.
- Communication skills: Demonstrated ability to produce high quality analytical reports and to deliver technical briefings in a clear and structured manner.

### **Education, Experience and Language Skills**

- Advanced University degree in nuclear science or engineering, chemistry, physics or electronics/ instrumentation/ computer science or related field.
- At least 10 years of relevant experience in civilian or military nuclear industry, including experience in non-proliferation.
- Experience in the design, manufacture, operation and procurement of goods or services related to sensitive sciences and technology relevant to nuclear weapons research and development.
- Proven experience in and knowledge of procedures for handling sensitive technical knowledge and issues on a State level.
- Experience in investigations into nuclear proliferation activities is an advantage.
- Fluency in written and spoken English. Working knowledge of other IAEA official languages (Arabic, Chinese, French, Russian or Spanish) desirable.

<b>Internal Human Resources use only:</b>	
Effective Date:	
Occupational Group(s):	
Post Number:	

## Task Proposal (SP-1)

### 1. Task Proposal

- 1.1. Task Proposal ID:** 15/ISF-002
- 1.2. Task Title:** Expert - NFC Technology Expert
- 1.3. Requestor / Division / Section:** Ferguson Matthew\_Raymond / SGIM / ISF
- 1.4. Task Proposal Type:** CFE Task
- 1.5. Task Category:** D (Information Processing)
- 1.6. Reason (if task is either a joint task or desires multiple acceptance)**

Please fill in

### 2. Project

- 2.1. Project ID and Title:** SGIM-003 - Information Analysis
- 2.2. Project Manager / Division / Section:** Ferguson Matthew\_Raymond / SGIM / ISF

### 3. Safeguards Requirement Identification

#### 3.1. Background

The Division of Information Management (SGIM) comprises four sections and provides the Department of Safeguards with services of data processing, secure information distribution, information analysis and knowledge generation necessary to draw independent, impartial and soundly based safeguards conclusions.

The Cost-Free Expert contributes to the IAEA's nuclear verification mission by conducting analysis of safeguards-relevant information and contributing to the State evaluation process. The Cost-Free Expert strengthens the consolidated State evaluation process by drawing on their technical expertise of the complex nuclear fuel cycle.

#### 3.2. What is Needed and When

The evaluation of nuclear activities within a State and the process required to draw safeguards conclusions requires the collection and analysis of information from wide and diverse sources. SGIM supports the State evaluation process by collecting and analysing the full spectrum of information available. These activities require technical expertise with a broad and deep knowledge of NFC-related equipment, infrastructure and processes and his/her proliferation significance. The NFC Technology Expert will be located within SGIM and their primary responsibilities will be to provide

technical analysis in support of nuclear sites and activities, and to respond to special requests for analytical support. The Nuclear Fuel Cycle Cost-Free Experts will contribute to analysis of NFC-related equipment, processes and infrastructure, covering all stages of the NFC. Initially, priority will be given to technology experts with conversion, fuel fabrication, reactors, and reprocessing experience.

### **3.3. Why is the task needed and consequences if task is not performed**

In response to increasing demands for analysis products and services, combined with anticipated increases in the number of nuclear sites under safeguards and the advanced nuclear technologies to safeguard, the Department needs to maintain and grow expertise. Without this support, the Department of Safeguards will not have the adequate analytical resources to support in-depth technical evaluations and/or assessments.

### **3.4. How will the task results be used and by whom**

The NFC Technology Expert will serve as a resource to the Department, working closely with both analysts and inspectors. The research and assessments conducted by the experts will be used by SGIM and the operations divisions as input into the State evaluation process. The latter form the basis for the Department's annual conclusions on Safeguards Implementation in States. The task will also allow SGIM to develop enhanced skills in scientific and technical information collection strategies and information integration/analysis.

## **4. Proposed Sub Tasks**

## **5. Proposed Work Outline**

This will be on-going information processing and analysis activity, with tasking driven by Department needs and timing.

- 5.1. Estimated Duration (months):** 12
- 5.2. Status Report Frequency:** Once every 1 Year
- 5.3. Supporting Divisions(s) / Section(s):** SG / All
- 5.4. End User Divisions(s) / Section(s):** SG / All

### **5.5. Proposed Work Phases**

**Phase Number:** 1

**Phase Title:** Produce Work Plan

#### **Description**

Please fill in

**Start Month after acceptance:** 1                      **End Month:** 12

**Carried out in sub tasks:**

## **6. Safeguards Approval Process**

**6.1. Suggested to MSSPs:** USA

### **6.2. Reason for suggestion of MSSPs**

The US operates an extensive nuclear fuel cycle with expertise in all technical elements and is therefore a natural source of personnel with the required skills and expertise.

## **7. Attached Documents**

N/A