Job Title: Radiation Safety Analyst IO0841

Requisition ID **3760** - Posted **05/03/2021** - (France, 13067 St Paul Lez Durance Cedex) - **Safety and Security** - **New Posting**

The ITER Organization brings together people from all over the world to be part of a thrilling human adventure in southern France—building the ITER Tokamak. We require the best people in every domain.

We offer challenging full-time assignments in a wide range of areas and encourage applications from candidates with all levels of experience, from recent graduates to experienced professionals. Applications from under-represented ITER Members and from female candidates are strongly encouraged as the ITER Organization supports diversity and gender equality in the workplace.

Our working environment is truly multi-cultural, with 29 different nationalities represented among staff. The ITER Organization Code of Conduct gives guidance in matters of professional ethics to all staff and serves as a reference for the public with regards to the standards of conduct that third parties are entitled to expect when dealing with the ITER Organization.

The south of France is blessed with a very privileged living environment and a mild and sunny climate. The ITER Project is based in Saint Paul-lez-Durance, located between the southern Alps and the Mediterranean Sea—an area offering every conceivable sporting, leisure, and cultural opportunity.

To see why ITER is a great place to work, please look at this video

Application deadline: 18/04/2021
Domain: Director-General
Department: Safety & Quality
Job Family: Organizational Support
Job Role: Functional Officer - 1
Job Grade: P2
Language requirements: Fluent in English (written & spoken)
Contract duration: Up to 5 years

Purpose

To perform radiation (neutron and gamma) transport analyses and activation calculations for ITER as directed by management.
The scope of work includes the creation of geometric models derived from Computer Aided Design (CAD) models and drawings, the definition of radiation sources and the performance of calculations as required for the evaluation of the radiation conditions for both equipment and workers. The responsibilities also include radiation protection engineering as well as shielding design/requirements, with participation in transverse working groups. In addition, the Analyst will be dealing with radiation and shielding analyses to verify or facilitate Deviation Request or help solve nonconformities.

Background

The Radiation Safety Group is the entity in IO Safety & Quality Department in charge of radiation safety (radiation protection) as well as Beryllium safety.

Major Duties/Roles & Responsibilities

- Performs radiation transport calculations and activations calculations;
- Supports the nuclear radiation qualification of equipment by maintaining the radiation maps;
- Supports radiation maps users in identifying the appropriate radiation conditions to be used whilst ensuring that data from radiation maps are properly used and kept consistent with the baseline data;

- Defines in coordination with other SQD Radiation Safety Responsible Officers and the Radiation Safety Group Leader the activities/input/output – schedules and resources regarding radiation calculations on the ITER building and subsequently reports these activities in RSG meetings and to the SQD management when appropriate, also providing safety expertise, especially for the ALARA principles, French radiation safety regulations and other radiation requirements;
- Maintains the database of models used for nuclear analyses in collaboration with Radiation Safety Responsible Officers;
- Reviews and follows-up nuclear calculations performed or provided by the ITER Team or provided by other ITER Members and contractors;
- Proposes justification, from radiation safety point of view, to Radiation Safety Responsible Officers or RSG Leader for Deviation Requests or Nonconformity reports; s
- Defines tasks in agreement with ITER parties to complete nuclear analyses;
- Supports the Contract Responsible Officer in the management of nuclear analysis contracts (prepares contract technical specifications, follows-up execution, ensures timely completion, ensures compliance with quality requirements, makes efforts to minimize contract time and cost);
- Estimates the effects of the design change and/or evolution of nuclear loads on ITER components and checks that the important and basic nuclear responses are kept within the design limits whilst not degrading the performance of the ITER machine;
- Contributes with Physical and Functional Integration Division and concerned technical responsible officers, to radiation protection engineering with the objective to define the best shielding design meeting radiation requirements;
- Prepares reports and present the results with the demonstration of their accuracy and compliance with IO requirements.
- Supports the timely execution, notably in relation to the Engineering work/schedule of the nuclear calculations and the verification of the design inputs;
- In cases where activities are classified as Protection Important Activities (PIA); prepares documents that demonstrate the consistency with safety requirements;
- Implements the technical control of the PIAs, as well as their propagation to the entire supply chain;
- May be requested to be part of any of the project/construction teams and to perform other duties in support of the project;
- May be required to work outside ITER Organization reference working hours, including nights, weekends and public holidays.

Special notice: May be requested to work on beryllium-containing components. In this case, you will be required to follow the established ITER Beryllium Management Program for working safely with beryllium. Training and support will be provided by the ITER Organization;

Measures of Effectiveness

- Prepares plans and performs radiation (neutron and gamma) transport analyses and activation accurate calculations in a timely manner meeting agreed deadlines;
- Performs the effective follow-up of contracts related to his/her scope of work;
- Provides comprehensive regular reports and summaries of the performed and revised analyses to ad-hoc persons within the defined schedule;
- Contributes to cost saving and improvement of work efficiency;
- Generates and maintains trustworthy and up to date information related to the machine's technical scope.

Experience & Profile

- ***Level of study:***
  - Master's degree or equivalent.
- ***Area of study:***

- Nuclear Physics/Nuclear Engineering.
- ***Technical Project experience/knowledge:***
  - At least 5 years of experience in nuclear calculations, radiation and safety related activities;
  - Good knowledge of safety and nuclear physics aspects of fusion devices and the basic functions of ITER machine and its components;
  - Good knowledge of nuclear analyses methodologies and criteria;
  - Good knowledge of software for nuclear transport calculations and nuclear activation (good knowledge of software used in IO (MCNP, FISPACT) is considered as an advantage);
  - Good knowledge of nuclear shielding methods to protect both equipment and people in terms of material shielding properties and effectiveness;
  - Extensive experience in similar jobs (involving similar work responsibilities) and/or additional training certificates in relevant domains may be considered a reasonable substitute for the required educational degree.
- ***Behavioral Competencies:***
  - Collaborate: Ability to facilitate dialogue with a wide variety of contributors and stakeholders;
  - Communicate Effectively: Ability to adjust communication content and style to deliver messages to work effectively in a multi-cultural environment;
  - Drive results: Ability to persist in the face of challenges to meet deadlines with high standards;
  - Manage Complexity: Ability to analyze multiple and diverse sources of information to understand/define problems accurately before moving to proposals;
  - Instill trust: Ability to apply high standards of team mindset, trust, excellence, loyalty and integrity.
- ***Language requirements:***
  - Fluent in English (written and spoken).
- ***Computer and IT skills:***
  - Good knowledge of the computer usage (super computers, cluster machines, stand-alone work stations);
  - Experience with Microsoft Office suite of programs.

The following important information shall apply to all jobs at ITER Organization:

- Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, ITER Values (Trust; Loyalty; Integrity; Excellence; Team mind set; Diversity and Inclusiveness) and Code of Conduct;
- ITER Core technical competencies of 1) Nuclear Safety, environment, radioprotection and pressured equipment 2) Occupational Health, safety & security 3) Quality assurance processes. Knowledge of these competencies may be acquired through on-board training at basic understanding level for all ITER staff members;
- Implements the technical control of the Protection Important Activities, as well as their propagation to the entire supply chain;
- May be requested to work on beryllium-containing components. In this case, you will be required to follow the established ITER Beryllium Management Program for working safely with beryllium. Training and support will be provided by the ITER Organization;
- May be requested to be part of any of the project/construction teams and to perform other duties in support of the project;
- Informs the IO Director-General, Domain Head, or Department/Office Head of any important and urgent issues that cannot be handled by line management and that may jeopardize the achievement of the Project's objectives.