

Job Title: Contamination Engineer IO0996

Requisition ID **4540** - Posted - (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: 30/09/2021

Domain: Director-General

Department: Safety & Quality

Job Family: Engineering

Job Role: Engineer – 3

Job Grade: P3

Language requirements: Fluent in English (written & spoken)

Contract duration: Up to 5 years

Purpose

In this role, you will enhance, maintain, promote and implement ITER Organization (IO) strategies and policies related to radiation safety along with the safe management of contamination risks associated to beryllium and radionuclides for every ITER lifecycle stages. While located on the worksite of IO, S/he will promote these safety policies and strategies on suppliers' worksites of Domestic Agencies as appropriate.

Additionally, you will determine the inventory and the source term with Physics experts, including Activated Corrosion Products stakeholders.

You will also guide, give advice, and collaborate closely with all IO domains, departments, divisions and other units as well as with Domestic Agencies on Contamination issues in relation with radionuclides and Beryllium.

Background

The Radiation & Beryllium Safety Group (RBSG) is part of the IO Safety & Quality Department and is in charge of the radiation protection of the workers, the public and nuclear safety related equipment (including electronics). The group is also in charge of the protection of the workers and the public against the danger arising from non-radioactive Beryllium exposure.

Key Duties, Scope, and Level of Accountability

- Acts as contamination and impact analysis engineer as well as Activated Corrosion Products referent person to support RBSG Group leader;
- Defines source term with Physics experts and performs contamination analysis and impact analysis calculations using computer modeling codes for the following:
 - Activated Corrosion Product studies,
 - Accidental analyses,
 - Analyses of maintenance activities to justify contamination controls design and Personal Protection Equipment,
 - Impact of effects of design changes of nuclear loads on ITER components,
 - Optimization of contamination control designs with regards to material, geometry and cost,
 - Activation calculations,
 - Inventory and term source estimates.
- Acts as a referent person on source term, contamination risks, and Activated Corrosion Products for requests from the nuclear safety experts or French nuclear regulator;
- Supports the ITER licensing process (RPrS update, RGE...) in responding to requests from French nuclear regulator related to nuclear analyses;
- Reviews contamination calculations performed or provided by IO team members or contractors,
- Provides radiological engineering support to ENG domain to provide best contamination control options to achieve radiation safety requirements applying ALARA principle
- Proposes justification, from radiation safety point of view, to RBSG Leader for Deviation Requests or Nonconformity reports;
- Prepares reports and presentations of calculations and modeling results in a timely manner with demonstration of their accuracy and compliance with IO requirements;
- In cases where activities are classified as Protection Important Activities (PIAs); prepares documents that demonstrate safety requirement compliance;
- Implements the technical control of PIAs, as well as their propagation to the entire supply chain when requested;
- 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 contamination, accidental, source term analyses 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;
- Provides comprehensive and clear chapters of radiation safety files;
- Generates and maintains accurate and up to date information related to the machine's technical scope.

Qualifications and Experience

- **Professional Experience:**
 - At least 8 years' experience working nuclear calculations in the field of radiation and/or nuclear safety.
- **Education:**
 - Master degree or equivalent in Nuclear Physics, Nuclear Engineering, or other relevant discipline;
 - The required education degree may be substituted by extensive professional experience involving similar work responsibilities and/or additional training certificates in relevant domains.
- **Language requirements**
 - Fluent in English (written and spoken).
 - Good working level in French (at least B2 level written and spoken)
- **Technical Competencies and demonstrated experience in:**
 - Radiation Protection in Nuclear facilities;
 - Nuclear analyses methodologies and criteria;
 - Analysis, requirements definition, risk identification and management: analyze, adapt, and anticipate proposed solutions and tasks to the environment and constraints, cascading customized information and or/requirements;
 - Quality management: Knowledge of international quality standards and / or French regulations for radiation safety;
 - Writing and presentation: write and/or review technical documents (ex: clear chapters of radiation safety files) in the domain of expertise, documenting and transmitting knowledge and data with clarity and precision, adapted to the audience;
 - Safety and nuclear physics aspects of fusion devices and the basic functions of ITER machine and its components;
 - Contamination controls methods to protect people;
 - Good knowledge of the computer usage (super computers, cluster machines, stand-alone work stations);
 - Knowledge of software such as PACTITER/OSCAR, FISPACT/ORIGEN, RESRAD and CERES activation would be an advantage.
- **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.

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.