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JOB DETAIL

Ref. IO2029 - 10/23/2018

Nuclear Analyst (CIO-187)

Main job	Nuclear Power
Department	CIO/ Central Integration Office
Division	CIO / Analysis Section/Division
Job Family	Engineer - 1
Application Deadline (MM/DD/YYYY)	12/09/2018
Grade	P2
Direct employment	Not required
Purpose	<p>To perform radiation (neutron and gamma) transport analyses and activation calculations for ITER as directed by management.</p> <p>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 and especially the shielding design/requirements.</p> <p>Performs radiation transport calculations; Performs activation 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 the Nuclear Integration Unit (NIU - Transversal ITER body) head the activities/input/output - schedules and resources regarding radiation calculations on the ITER building and subsequently reports these activities in NIU meetings and to the management, also providing safety expertise, especially for the ALARA principles, French radiation safety regulations and other Safety Department's radiation requirements as appropriate;</p>
Main duties / Responsibilities	<p>Maintains the database of models used for nuclear analyses; Reviews and follows-up nuclear calculations performed or provided by the ITER Team or provided by other ITER Members and contractors; Defines tasks in agreement with ITER parties to complete nuclear analyses; Manages 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 Design & Construction 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; May be required to work outside ITER Organization reference working hours, including nights, weekends and public holidays; 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 schedule; Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, values and ethics.</p>

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Measures of effectiveness	<p>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.</p> <p>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.</p> <p>Reports to the analysis Section/Division Head; As member of the Nuclear Integration Unit (NIU), the activities will be performed according to a defined plan in interaction with NIU; In response to requests from the Director-General (DG) and/or Central Integration Office (CIO) Head, or proactively, informs the DG/CIO Head of any important and urgent issues that cannot be handled by the concerned line management and may jeopardize the achievement of the Project's objectives.</p>
Level of study	Master or equivalent degree
Diploma	– Nuclear Physics/Nuclear Engineering
Level of experience	At least 8 years
Technical experience/knowledge	<p>At least 8 years of experience in nuclear calculations, radiation and safety related activities;</p> <p>Good knowledge of safety and nuclear physics aspects of fusion devices and the basic functions of ITER machine and its components;</p> <p>Good knowledge of nuclear analyses methodologies and criteria;</p> <p>Good knowledge of software for nuclear transport calculations and nuclear activation (good knowledge of software used in IO is considered as an advantage);</p> <p>Good knowledge of nuclear shielding methods to protect both equipment and people in terms of material shielding properties and effectiveness;</p> <p>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.</p>
Specific skills	MS Office standard (Word, Excel, PowerPoint, Outlook)
General skills	<p>Ability to dialogue with a wide variety of contributors and stakeholders;</p> <p>Ability to adjust communication content and style to deliver messages to work effectively in a multi-cultural environment;</p> <p>Ability to persist in the face of challenges to meet deadlines with high standards;</p> <p>Ability to gather multiple and diverse sources of information to understand problems accurately before moving to proposals;</p> <p>Ability to apply high standards of team mindset, trust, excellence, loyalty and integrity.</p>
Others	Good knowledge of the computer usage (super computers, cluster machines, stand-alone work stations)
Languages	English (Fluent)

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