

<b>Title: Cooling Water Chemistry Engineer</b>		<b>CEP-010</b>
<b>Reports to Line Manager:</b> Leader of Cooling Water System Section, Department for Central Engineering and Plant Support (CEP)		
<b>DIRECT EMPLOYMENT:</b> NOT REQUIRED		<b>GRADE RANGE:</b> P3 -P4
<b>Date Written:</b> May 2008	<b>Date Revised:</b>	<b>Date Revised:</b>

**Purpose:**

The Cooling Water Chemistry Engineer will be responsible for the design, layout, installation and operation of the water treatment related plant & systems which are associated with various water cooling and baking systems. He/she will ensure that the appropriate water chemistry is provided and controlled to prevent excessive formation of activated corrosion productions and to prevent stress corrosion cracking.

**Major Duties / Responsibilities:**

- Reviews the functional and technical specifications and requirements of various users related to water chemistry and treatment (filtration, ion-exchange, degasification, de-oxidifier, chemical additives/dosages, feed rate, regeneration, waste water, aerator, and pumping station) and evaluates the respective documents.
- Advises on all matters pertaining to the water treatment plant process & distribution, its control and operation to ensure the economical functioning of remote water distribution or plant facilities, and coordinates operational strategies with a Water Facilities or O&M (Operation and Maintenance) personnel and users.
- Reviews, recommends operational details to support the procurement of the water cooling systems and assists in the implementation of new monitoring/control instrumentation.
- Supports management of the required documentation to certify that all Cooling Water Systems activities are in compliance with environmental regulations and communicates with regulatory agencies, consultants, and legal counsel as needed.
- Works in close contact with the various ITER group/section leader for the Cooling Water Systems and designers of Participant Teams.
- Contributes to the procurement arrangement among Participant Teams and collaboration with other ITER organizations on issues related to water chemistry, safety and environmental compliance.
- Provides support in the licensing activities for safety design and assessment of the safety related function.

- Is responsible for the consistency of the Cooling Water Systems Planning & Construction in relation to the ITER construction, commissioning and operation plan.
- Assists the group/section leader in on going issues with high relevance to the design, schedule, planning and organizing the procurement & execution activities at the job site.
- Maintains a strong commitment to the implementation and perpetuation of ITER safety program, values and ethics.

#### **Qualifications Required:**

- University degree, or higher in Engineering.
- Plant System Engineer with at least 10 years of experience in any medium or large size chemical industries /Nuclear power plant. Good knowledge in design and layout of system, installation and operation of various water treatment / process plant systems is essential. Knowledge of maintenance and chemicals inventory management would be an advantage.
- Excellent English speaking and writing ability. Interpersonal and collaborative skills are required.

#### **Work Direction and Interfaces:**

- Reports to the Leader of Cooling Water System Section in the Central Engineering Plant Support (CEP) Department.
- Interfaces with other ITER Project Group/Section/ Department as required.
- Maintains communications with other organizations within the ITER collaboration and the nuclear community.

#### **Authority/Approval Levels:**

Has authority and approval levels defined by the section leader/ Deputy Director General for CEP for his/her scope of work

#### **Measures of Effectiveness:**

- Successfully communicates with the ITER staff to establish design requirements to achieve the required water chemistry. Develops and implements plans for continuous improvement of water chemistry parameters during the initial stages of operations.
- Contributes to identifying and resolving critical path issues, and meeting schedule milestones.
- Successfully communicates with other Participant Teams/ organizations within the ITER collaboration and the fusion community.
- Successfully completes tasks assigned under “Main Duties / Responsibilities” above.