

# Lead Nuclear Safety Engineer

## Position summary

The Lead Nuclear Safety Engineer will be the subject matter expert at Moltex, managing a small team of engineers and scientists to assist in the design of complex facilities. This position reports directly to the Head of Engineering, and will work closely with other technical area leaders and their teams, as well as the Head of Licensing & Regulatory Affairs. The candidate will lead the nuclear safety engineering of the Stable Salt Reactor - Wasteburner (SSR-W) and WASTE TO STABLE SALT (WATSS) fuel processing facility. The candidate must support the 'Safety by Design' approach to reactor safety, and have a deep understanding of the safety of proposed structures.

**Position:** Lead Nuclear Safety Engineer

**Status:** Permanent, full-time

**Location:** Saint John, NB, Canada

**Reports to:** Head of Engineering

**Apply:** Please submit a resume and cover letter to [careers@moltexenergy.com](mailto:careers@moltexenergy.com) and indicate the job title in the subject line.

**NOC code:** 2132

## Responsibilities

- Develop detailed arguments for the safety approaches Moltex adopts for the SSR-W and WATSS designs, including arguments regarding the elimination and substitution of risks rather than engineering controls (i.e., convert the 'what' developed by Moltex at the conceptual level as part of the safety case into the 'how' for the particular design)
- In line management of the nuclear safety engineering team, providing guidance and direction, including objective setting, performance management, and training and development needs assessment and implementation
- Integrate with other engineering groups to support the overall design and licensing efforts
- Provide technical and strategic advice to senior management to resolve nuclear safety issues
- Assist the client in its nuclear licensing process, including the creation of documents such as preliminary and final safety assessment reports (PSAR and FSAR)
- Interact with regulators to explain methods, models and analyses
- Develop and review nuclear safety documentation, including documented safety analyses, technical safety requirements, hazard analyses, classification & qualification requirements with respect to safety functions and items important to safety, radiological consequences studies, internal and external hazards studies, including the definition of the load case, determination of postulated initiating events (PIEs), and design basis accidents (DBAs), etc.
- Verify and validate the computer codes used in these analyses

## Skills, qualifications & experience

### Essential

- Advanced degree in nuclear engineering, or applicable science or engineering discipline
- 15+ years' experience in the nuclear safety area through support of the commercial nuclear industry, a national regulatory authority or a leading institution in nuclear technology R&D
- Deep understanding of the fundamentals of the categorization of safety functions and the classification of structures, systems and components (SSC), based on functional analysis of failures consequences
- Ability to negotiate nuclear safety control strategies with all stakeholders
- Experience in multiple types of analysis or analysis on multiple designs

### Desired:

- Strong understanding of thermal hydraulic behaviour of nuclear power plants under steady state and transient conditions
- Good knowledge of all technical disciplines within the nuclear domain, and ability to discuss their safety aspects
- Familiarity with nuclear design, regulatory requirements, and risk-informed performance-based technology guidance for non-LWRs
- Knowledge of Canadian licensing system

## Behavioural skills & personality

- Ability to think flexibly and creatively and not be trapped by precedent
- Strong problem-solving skills and technical credibility



- Ability to take initiative and deliver results
- Ability to plan work responsibly, balancing company goals with schedules, budgets, safety and resources
- Ability to collaborate with team members and reach consensus on the way forward

## What Moltex offers...

Moltex boasts a diverse team of professionals collaborating daily across time zones. For those on board, it is going to be a challenging and rewarding journey. The office is in the city centre with various nearby amenities. Moltex employees have access to a full range of benefits including:

- Paid vacation and personal days
- Flexible work environment
- Learning and development resources
- Excellent growth opportunities
- Optional compressed work week
- Medical, dental and vision
- 13 statutory and other holidays
- Complimentary refreshments

**Moltex is an equal opportunity employer.** Moltex prides itself in having a team that promotes diversity, inclusion, leadership, mindfulness, high initiative, energy and passion.