Position	**:**	**Senior Project Metallurgist/Engineer**
Department	**:**	**R&D/Technology**
Reports to	**:**	**R&D/Technology Manager**
Date Prepared	**:**	**January 2025**

GENERAL ACCOUNTABILITIES

Reporting to the R&D/Technology Manager, this position is responsible for a variety of duties including new materials development, product development, process development, metallurgical design, customer/supplier interface, project management, proposal writing and leading lower-level employees including laboratory technicians and engineers. This role engages with a multi-disciplinary scientific and technical staff to provide highly reliable data, infrastructure, and scientific resources to diverse stakeholders.

PRIMARY RESPONSIBILITIES

- Using scientific and engineering principles to develop new processes, new materials and new products in line with the growth strategy of the company. This activity requires reading technical literature, planning and conducting experiments, interacting with customers and suppliers, and leading the activities of lower-level employees.
- Creating various development/prototyping programs. This will involve customer interface, planning and scheduling, identification and purchase of raw materials, and leading the activities of lower-level employees.
- Responding to RFP's that are in line with the company's strategy, thus providing funding for R&D activities.
- Developing and championing a world-class technology environment within the Rare Metals division, with a specific emphasis on engineering and project management controls for all R&D/Technology efforts. A high level of technical report writing and metallurgical/technical interpretation is desired.
- Leading process technology efforts to change our plants for the better, while improving safety, quality, metallurgical efficiency, reducing environmental footprint and lowering cost. The Technology Manager will provide you with defined project responsibilities and deadlines on assigned metallurgical development or engineering problems.
- Providing technical assistance for the operating plants regarding chemistry, unit operations, procedures, metallurgical mass balance, etc. Specific focus is expected to be placed on defining the business case or project justification prior to commencing laboratory work (following a "Stage Gate Lite" approach). This task ensures that laboratory test work is aligned with what can be achieved in Operations.
- Designing, directing, and supervising scale-up experiments & transfer to production-scale processes for recovery of high-value metal products from varying types of feed materials and/or processes for the production of value-added materials.
- Participating in technical discussions with all stakeholders.

SECONDARY RESPONSIBILITIES

- Working with staff to improve the efficiency, precision and accuracy of existing methods.
- Establishing a high professional standard of performance, ethics, integrity and behaviour in the conduct of science and engineering within the organization.
- Handling multiple projects simultaneously.
- Providing regular status reports.
- Acting as a technical interface with industry experts on state-of-the-art techniques.
- Adhering to all safety requirements.
- Writing detailed summary reports.
- Completing any other tasks as needed or as directed by management.

DECISION-MAKING REQUIREMENTS:

- The incumbent creates technology program options and recommends the associated action plans for approval to the R&D/Technology/Project Manager and Director of Strategic Development & Technology.
- The incumbent will have signing authority for expenses up to CAD 2,000 to execute experimental programs.
- The incumbent does NOT have HR responsibilities towards resource allocation/utilization and will address his/her requests to the R&D/Technology Manager.
- The incumbent is responsible for recommending internal and external resource requirements for all projects.

INTERACTION WITH OTHERS:

- Direct report to the R&D/ Technology Manager.
- Close rapport with laboratory technicians during both directing and reviewing technical laboratory test work.
- Close rapport with scientists and engineers during design, review, and evaluation of laboratory procedures and results; and the development of process flow sheets.
- Liaise with plant manager(s) and process engineers before & during technology transfer and start-up of production lines and as an ongoing technical engineering resource.
- As needed, working as a project member of a multidisciplinary team.
- Professional relationship with industry peers, outside consultants/contractors, tolling/JV partners and chemical & equipment suppliers.

EDUCATIONAL BACKGROUND & EXPERIENCE REQUIRED:

- Master's or PhD in metallurgy, materials science, chemical engineering, or related discipline.
- Licensed Professional Engineer designation or eligibility for same, an advantage but not a requirement.
- Intimate working knowledge of hydro- and pyrometallurgical unit operations. Typical examples include Solvent Extraction (SX), Ion Exchange (IX) and IX resin selection, metallothermic reduction, vacuum melting and refining techniques. Experience in both laboratory- and pilot-scale testing as it relates to these areas is also desirable.
- Knowledge and experience in material science are an advantage, but not a requirement.
- Project management experience in an industrial/commercial environment.
- At minimum 8-10 years of related experience.
- Strong mechanical and operational aptitude.
- Ability to develop effective interpersonal relationships with all levels of administrative, technical and commercial/financial staff.
- Good analytical, communication, and interpersonal skills.
- A self-motivating and proactive approach to creating a positive attitude in an ever-changing environment.
- Strong competencies in problem-solving/analysis, and technical capacity. Demonstrated experience using a combination of analytical, experimental, and theoretical approaches to solve problems.
- Demonstrated ability to design and execute effective strategies to advance programmatic and scientific/engineering goals, project management, and budget management.
- Outstanding interpersonal skills with a communication style that encourages open expressions of ideas and opinions. Demonstrated ability to work in and foster a collaborative work environment. Must build consensus, move projects forward, and compromise wisely, often under deadline pressure.
- Demonstrated ability to work effectively and collaboratively with individuals from a wide range of professional backgrounds and career stages and demonstrated mentoring ability. Ability to bridge competing views and work across diverse cultures.
- Strong personal integrity and work ethic, superior judgment, emotional intelligence, the ability to maintain confidentiality, and the ability to show sound judgment and independent initiative.

Additional Eligibility requirements:

- Post-offer physical and drug screen

Please note: The above statement reflects the general details considered necessary to describe the principal functions of the job identified and shall not be considered as a conclusive description of all work required in the position.