SRC Rare Earth Processing Facility
Frequently Asked Questions
General

1. What is the cost of the Facility?

The total cost of the vertically integrated SRC Rare Earth Processing Facility to date is $87 million. The Facility is being constructed on time and on budget.

2. What does the funding cover?

With support from the Government of Saskatchewan, SRC is constructing North America's first fully integrated, commercial, demonstration Rare Earth Processing Facility, with hydrometallurgy, separation and metal smelting units.

SRC's Facility will require up to 3,000 tonnes per year of monazite concentrate on a minimum 80 per cent basis. The Monazite Processing Unit (MPU) will produce mixed rare earth chloride. This is fed to a Separation Unit that will produce lanthanum/cerium, a neodymium/praseodymium mixture and a medium/heavy rare earth mixture containing terbium/dysprosium. The separated neodymium/praseodymium will be further processed in a Metal Smelting Unit to produce 400 tonnes per year of didymium metals.

3. What will be done at the Facility?

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4. How big is the Facility?

SRC is in the process of some structural and design decisions that may impact the square footage of the Facility. However, the three units will be roughly 120,000 square feet.

5. What rare earth services will SRC offer?

We offer the following services through our existing service lines and facilities:

- Rare earth processing technology development and commercialization for monazite, bastnaesite, apatite and uranium processing waste
- Radioactive tailings processing and treatment; recovery of thorium and uranium
- Validation and demonstration of rare earth processing technologies in bench, pilot and semi-commercial scale

SRC plans to use this Facility as a starting point for creating an REE technology hub, which will include developing downstream and upstream aspects of the REE supply chain.

SRC also offers services for:

- Mid and downstream rare earth product development
- Production on magnet metals
- Technoeconomic evaluation of rare earth processing technologies
- Solvent extraction
- Metal smelting
- REE plant operational improvement and support
- Turnkey services for commercial-scale rare earth processing facilities
- Mineral analysis: geochemistry and mineralogy
- Environmental permitting

For more information on these services please visit our SRC Rare Earth Processing Facility Brochure.

6. Does SRC have any future plans for the Facility or the rare earth industry?

SRC plans to use this Facility as a starting point for creating an REE technology hub, which will include developing downstream and upstream aspects of the REE supply chain. It will also include the development of additional midstream and downstream processing of different REE minerals and/or research and development of new technologies in rare earths processing and the production of rare earth metals and alloys.

7. Why Saskatchewan?

As the world looks to secure access to the critical minerals vital for telecommunications, computing and clean energy, Saskatchewan (and Canada) are well-positioned to meet that demand.

Out of all the Canadian provinces, Saskatchewan stands out in attracting most of the major global mining companies to the province due to its rich mineral resources, efficient regulatory environment and substantial investment opportunities, combined with a high-quality geological database.

The Fraser Institute ranks Saskatchewan as the most attractive jurisdiction in Canada for mining investment and the third highest globally. The Fraser Institute also ranks Canada as the number one country in the world for mineral investment (based on the combined rankings of all the provinces and territories).

Saskatchewan released its Critical Minerals Strategy in early 2023. This strategy includes goals around doubling the number of critical minerals being produced in Saskatchewan by 2030 and establishing Saskatchewan as a Rare Earth Element Hub.

8. How can industry engage?

The SRC Rare Earth Processing Facility is positioned as a catalyst to stimulate the resource sector in Saskatchewan and across Canada, providing the early-stage supply chain needed to generate industry investment and growth.

There are two main ways to engage:

- SRC will be seeking investment into further developing and expanding the REE sector
- SRC offers a fee-for-service model that provides services and expertise to clients

9. Are there environmental regulations/standards in place around this type of work and what are they?

There are strict environmental regulations and standards in place for waste management in Saskatchewan with respect to these types of ores. As a top mining jurisdiction, there are well-documented controls in the province. SRC has always met and exceeded these requirements with respect to its waste management systems in place and will continue to do so in this project, following the most stringent operating standards.

SRC works closely with its clients and stakeholders to explore opportunities and develop sustainable solutions for now and in the future. We are committed to providing positive environmental impacts in our province and around the world through diverse projects and initiatives.

10. What safeguards are in place to protect the environment?

The SRC Rare Earth Processing Facility will follow the most stringent operating standards. Our goal is to build processes to be environmentally sustainable with recycling in mind to minimize the environmental footprint of our operation. SRC plans to treat, re-use and recycle as much of the solution as possible. This means that all wastewater will be treated and reused resulting in no liquid discharge from the Facility. All solid waste will be handled and disposed of properly following regulations and procedures, which SRC and mining companies in Saskatchewan do currently.

11. What products will SRC produce?

SRC's Facility will produce the following products:

- 3,000 tonnes per year of tri-sodium phosphate as a byproduct
- 450 tonnes per year of medium/heavy mixed REE carbonate with 5 tonnes per year of terbium and 20 tonnes per year of dysprosium
- 1,900 tonnes per year of lanthanum/cerium mixed REE carbonate with 600 tonnes per year of cerium oxide and 300 tonnes per year of lanthanum oxide

- 400 tonnes per year of neodymium/praseodymium metal alloy

12. What experience does SRC have in this area?

SRC, one of Canada's leading research and technology organizations, has investigated lithium and REE technologies for over 15 years. SRC's Mineral Processing group, led by world-class REE experts, is recognized nationally and internationally as a centre of expertise in REE extraction and processing technology.

13. How many jobs will this create?

SRC is expecting about 75 full-time equivalent (FTE) positions for the Facility operations team, such as manager, planner, safety/quality, power engineers, process engineers, technologists, millwrights (industrial mechanics) and warehouse staff (shipping/receiving).

During construction, SRC could have up to 70 people working concurrently, but over the course of construction probably several hundred different workers will have a role at various times.

Additionally, a fully functional REE industry in Saskatchewan and across Canada would create tens of thousands of jobs.

14. What is SRC's unique selling point?

Most of the world has been dependent on foreign sources of critical minerals for many decades. This import dependence can be a concern because it puts supply chains and material users at risk. With the evolution in both the automotive and energy industries, hydrocarbon demand is diminishing and REE demand is increasing. The secure supply of rare earth elements and the resiliency of their supply chains are essential to meeting this demand. SRC's Facility will provide a secure supply of rare earths from a stable jurisdiction.

SRC will solely operate the commercial demonstration facility at the highest environmental standards and owns all the necessary permits. Our target is to be net zero on REE within the first few years of operation. There will be zero liquid discharge from the Facility and it will be ESG compliant.

SRC designed and manufactured proprietary, commercial-scale solvent extraction cells for its Rare Earth Processing Facility. These cells are being designed with automation algorithms to improve productivity and efficiency. Saskatchewan is now only one of a handful of jurisdictions in the world with this capability.

SRC's industrial-scale Metal Smelting Unit is capable of producing neodymium, praseodymium and didymium metals. SRC is developing this process with operational automation to reduce costs and improve process efficiency. In August 2022, SRC achieved a significant milestone for this phase of the project during a test run of its Metal Smelting Unit by processing the first large-scale production of magnet metals in Canadian history.

SRC has decades of experience in rare earth technologies related to beneficiation, hydrometallurgy, separation and metal smelting. We offer a stage-gated, fast-to-fail approach and bench and pilot-scale platforms for technology and process testing.

15. What are the key milestones achieved thus far?

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16. Where will the Facility be located?

The Facility is being built near SRC's other laboratories and facilities in the north industrial area of Saskatoon, Saskatchewan.

17. Where is SRC getting the feedstock for the Facility?

In July 2021, SRC procured monazite concentrate from Industrias Nucleares do Brasil (INB), S.A., in Brazil from their mine and processing facility. The monazite concentrate will be used as a feedstock for the MPU, once operational.

SRC will continue to search for sources of monazite, with the aim of securing a mid to long-term supply from both domestic and international sources.

18. Will SRC's Facility be ESG compliant and net zero?

SRC will solely operate the commercial demonstration Facility at the highest environmental standards and owns all the necessary permits. Our target is to be net zero on REEs by 2030. There will be zero liquid discharge from the Facility.

SRC has years of scientific, technical and management knowledge dealing with tailings, as well as experience working with regulators, communities, Indigenous groups and industry. Our capabilities in this area also include holding licences from the Canadian Nuclear Safety Commission (CNSC), as well as expertise at our Pipe Flow Technology Centre™ and through our remediation project in northern Saskatchewan that involves managing tailings remediation work at a large, abandoned uranium mine site.

SRC works closely with its clients and stakeholders to explore opportunities and develop sustainable solutions for now and in the future. We are committed to providing positive environmental impacts in our province and around the world through diverse projects and initiatives.

For more than 60 years, SRC has actively engaged with the uranium and nuclear industries on numerous fronts. Our work has encompassed research to improve analyses and processes, project management and on-the-ground operational support.

19. Does SRC have a buyer for its products?

There has been significant interest in the purchase of the Facility's products from companies and governments around the world. These products are in extremely high demand and SRC does not foresee any issues selling them when the time comes but we certainly want and need to be strategic with the decision.

How products are sold in the future will have many different scenarios. SRC will evaluate the options and deal with them on a case-by-case basis at the appropriate time.

20. Will SRC look to procure construction and/or other services through this project?

SRC is committed to fair and transparent procurement processes.

We are working to design, install, procure and commission the Facility and will require outside expertise for various pieces.

As is standard practice for SRC, we are issuing competitive award processes for work through SaskTenders throughout the process.

21. How do I submit a proposal?

SRC Purchasing handles all requests for proposals, estimates and quotations to solicit bids for procurement contracts related to this Facility.

Available opportunities will be posted on **SaskTenders** (Organization Type: Crown Corporation > Saskatchewan Research Council). For more information, please contact SRC Purchasing by **email** or phone at **1-306-933-5400**.

22. What is SRC's commitment to local Saskatchewan-based service providers?

While SRC has obligations under the New West Partnership Trade Agreement and the Canadian Free Trade Agreement, evaluation criteria may include elements such as community benefits or local content, that is considered part of the best value equation.

23. What is SRC doing to promote Indigenous engagement?

SRC hired a senior employee in the role of Director, Indigenous Relations in October 2022 to grow and improve the relationships between SRC and First Nations and Métis governments and communities.

SRC recognizes the significant diversity of Indigenous peoples who live in Saskatchewan and around Canada.

SRC has established an engagement policy that will develop meaningful, respectful relationships with Indigenous peoples, businesses and communities. SRC believes this is vital for future company success to support reconciliation between Indigenous peoples and broader society.

24. How can Indigenous contractors have a chance at working on SRC projects?

Procurement opportunities are available on the SaskTenders website and open to everyone. SRC has recently implemented a new Indigenous Procurement Policy that provides a framework for economic reconciliation going forward and will be incorporated into ongoing procurement.

25. Why has SRC partnered with a Yellowknife Indigenous company on a rare earth processing facility rather than local First Nations and Métis companies?

Unfortunately, there has been some confusion about the work that SRC is doing. SRC is creating its own Facility to catalyze an REE sector in Saskatchewan. SRC is not partnered with any other organizations.

26. Why hasn't SRC reached out to all Saskatoon Indigenous Nations as the Rare Earth Processing Facility must have triggered the Duty to Consult?

The REE Facility is not a mining operation nor is the facility located on Crown land and therefore does not have a Duty to Consult obligation associated with it.