



Geomega Provides Update on Demo Plant, Project Design Change and Start of Site Preparation Activities at Saint-Hubert Facility

Montreal, March 19, 2024 – Geomega Resources Inc. (“**Geomega**” or the “**Corporation**”) (TSX.V: GMA) (OTC: GOMRF), a developer of clean technologies for the mining, refining, and recycling of rare earths and other critical materials, is pleased to provide an update to shareholders on its rare earths recycling demonstration plant, including certain required project design modifications, and an update on site preparation activities that have started at the Saint-Hubert facility.

Project engineering update

The past 6 months have been dedicated to bringing engineering to a sufficient level of completion that it could be tendered to the construction contractors for execution and completion of the rare earths recycling demonstration project. Procurement also progressed and various items were ordered while others were received at the Saint-Hubert facility during this period. In parallel, permitting activities have been ongoing at both the municipal and provincial levels. The objective was to be able to start the construction activities in February 2024. As a result of providing all the requested data to the governmental authorities, Geomega was notified by the municipality of Saint-Hubert, a borough within the city of Longueuil, that the sewer system capacity is not currently able to accommodate the water discharges from the cooling tower that was to be installed for the demonstration plant (please see [September 20, 2023 press release](#) for the 3D model of the originally intended layout of the plant and cooling tower). Various solutions have been evaluated by Geomega, including in collaboration with city engineers, however none were appropriate for the project due to resulting increased costs, additional unforeseeable delays, and the overall feasibility of the proposed solution. As a result, Geomega had to undertake a design change for the rare earths recycling demonstration plant.

Project design change from batch to continuous

Geomega’s engineering team has begun a design change for the rare earths recycling demonstration plant from a batch process to a continuous 24hrs operation with smaller equipment and lower demand for utilities, most importantly in regard to the cooling requirements (chillers with a closed loop operation instead of a cooling tower with regular water discharges into the municipal sewer system). Despite the design change, the demonstration plant throughput capacity is planned to remain unchanged at 1.5 tonnes of feed material per day.

Geometa's engineering team believes that there are advantages to the change to continuous design:

- Continuous design is usually preferred over batch design in industrial operations and was the ultimate goal for the project in the long-term. Switching to this design now is much more applicable to the long-term market targeted by the Corporation, namely swarf recycling from NdFeB magnet factories that are being planned for Europe and North America. The first priority of the demonstration plant remains to process end of life and scrap magnets.
- Continuous design simplifies the control system, improves the quality of the product and, therefore, has advantages on both the operating and capital costs of the demonstration plant.
- The smaller equipment should have better availability with shorter lead times which should help the project to remain within the Corporation's timeline for the rare earths recycling demonstration plant.

Geometa is aware that such a major design change may result in significant risks. The following are some of the primary risks that were considered and are being addressed by the management and engineering teams at Geometa:

- Engineering – Batch to continuous design change is an important modification and requires a major rework of engineering documentation. The current detailed engineering package can no longer be used for construction as is, except for some sections. The new engineering package will be using components from the previous design and will help reduce some delays.
- Procurement – The design change has a major impact on size of equipment and on equipment selection. An ongoing procurement review has already identified equipment that has been purchased and received but is no longer needed for the continuous design and has been already put for sale. Other equipment that has been ordered but not yet received was cancelled. Replacement equipment is being selected as part of the ongoing engineering rework and will be ordered as soon as possible.
- Piloting – The batch process was piloted in 2019 and 2020 with the main objective of scaling it up and then converting to continuous process. Implementing the scale up of the process and switching from batch to continuous in one step is not optimal. On the other hand, the Corporation's R&D team has been working over the last year on continuous piloting in other similar processes. That experience gained provides the management and engineering teams with the confidence that the continuous process now proposed for the rare earths recycling demonstration plant should achieve the set product targets.
- Feed material – Dealing with end-of-life material always had a risk of feed variability which is better to adjust to with a batch design. Switching to continuous design requires a more uniform feed which may have an impact on sourcing of material and might require blending and preparation of feed in a way that will not impose significant changes on the operation conditions.

For ease of reference, a comparison between batch and continuous design is presented in the table below:

	Batch Design	Continuous Design
Operation schedule	8-10 hrs per day	24 hrs per day
Process cooling technology	Cooling tower with regular water discharges	Chillers with closed loop operation
Magnet throughput capacity	1.5 tpd	1.5 tpd
Heating duty	1,962 kW	466 kW
Cooling duty	1,940 kW	449 kW

Start of Site Preparation Activities at the Saint-Hubert Facility

Following a thorough review of the required construction activities and the ongoing design change, the engineering team was able to select several items that are not being impacted by the design change to continuous operation. In particular, Geomega has secured the services of a local construction company that will manage and execute the required work. The site preparation activities that have begun at the Saint-Hubert facility include some of the civil work that is not being affected by the design change, electrical work, installation of the required fire protection system and the HVAC system for the rare earths recycling demonstration plant. The majority of that work is expected to be completed by end of June 2024. Engineering and procurement work will continue in parallel to these site preparation activities to avoid any further delays once equipment installation and assembly is ready to commence.

“We have been working diligently with all the stakeholders to build a sustainable solution for rare earths recycling. Although we have some challenging engineering work to do during the coming months, we are excited to finally start the site preparation activities at our Saint-Hubert facility. We believe that the proposed design modifications not only resolve the obstacle we faced with the municipality’s sewer infrastructure but overall makes our process a more environmentally sustainable technological solution to REE recycling, a more robust industrial application and a better demonstration plant for our future clients to see. As design modifications and procurement progress during the coming months, we will be better positioned to provide regular updates. In addition, I would like to highlight that none of the recent developments and changes to the REE demonstration plant are expected to affect our bauxite residues valorization initiatives. Furthermore, we continue to believe that the centralized facility in Saint-Hubert is the best available option for both the demonstration plant and our other R&D activities.” commented Kiril Mugerma, President & CEO of Geomega.

Addendum to the Last Press Release

Geomega would like to make an addendum to its [January 26, 2024 Press Release](#) relative to the vesting of the Restricted Share Units (“RSUs”) in order to align with the policies of the TSX Venture Exchange. The change is as follows:

Vesting and settlement terms as indicated in the January 26, 2024 press release: “The RSUs vest over a 2-year period in increments of 25% every 6 months and may be settled after 3 years.”

The corrected vesting and settlement terms: “The RSUs vest over a 2-year period in increments of 50% every year and may be settled after 3 years.”

The rest of the information presented in the January 26, 2024 press release remains unchanged.

About Geomega (www.geomega.ca)

Geomega develops innovative technologies for extraction and separation of rare earth elements and other critical metals essential for a sustainable future. With a focus on renewable energies, vehicle electrification, automation and reduction in energy usage, rare earth magnets or neo-magnets (NdFeB) are at the center of all these technologies. Geomega's strategy revolves around gradually de-risking its innovative technology and delivering cashflow and return value to shareholders while working directly with the main players in these industries to recycle the magnets that power all those technologies.

As its technologies are demonstrated on larger scales, Geomega is committed to work with major partners to help extract value from mining feeds, tailings and other industrial residues which contain rare earths and other critical metals. Irrespective of the metal or the source, Geomega adopts a consistent approach to reduce the environmental impact and to contribute to lowering greenhouse gases emissions through recycling the major reagents in the process.

Geomega's process is based around its proprietary, low-cost, environmentally friendly way to tap into a C\$1.5 billion global market to recycle magnet production waste and end of life magnets profitably and safely.

Geomega also owns the Montviel rare earth carbonatite deposit, the largest 43-101 bastnaesite resource estimate in North America and holds over 16.8M shares, representing approximately 14% of the issued and outstanding shares, of Kintavar Exploration Inc. (KTR.V), a mineral exploration company that is exploring for copper projects in Quebec, Canada.

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