

EnviroGold Global Files Patent for Efficient Process to Unlock Precious and Strategic Metals in Refractory Ores and Eliminate Environmentally Hazardous Waste

Toronto, Ontario—(GLOBE NEWSWIRE – November 16, 2022) – EnviroGold Global Limited (CSE: NVRO | OTCQB: ESGLF | FSE: YGK) (“EnviroGold Global” or the “Company”), a Clean Technology Company accelerating the world’s transition to a circular-resource economy, is pleased to announce it has filed a patent for its proprietary process to efficiently recover precious and critical metals from refractory ores while completely neutralizing the acid-forming potential of waste (the “NVRO Process”). The Company plans to apply this technology to tailings as well as primary production streams worldwide.

There are over 280 billion metric tonnes of mine tailings on the earth’s surface with a contained metal value that exceeds US\$3.4T. McKinsey & Company reports that refractory ore represents 24% of current gold reserves and 22% of all gold resources globally, most of which are in jurisdictions with low mining-regulatory and political risk. Moreover, gold reserve grades from refractory ore are 86% higher than non-refractory materials, and gold production from refractory sources is expected to grow at almost five-times the pace of non-refractory sources over the next several years ([link](#)). Refractory ores will also be of growing importance in the recovery of strategic and critical metals such as copper, lead, and zinc.

Costs are historically higher in refractory ore projects, but the NVRO Process addresses the key technical problems preventing the recovery of trillions of dollars of trapped resources, lowering both CAPEX and OPEX over existing processes designed to address refractory ore, with better environmental outcomes.

NVRO Process Highlights

- Low, exothermic temperatures of <100°C (compare to energy-consuming roasting at 500°-700°C)
- Operates at atmospheric pressure (14.6 PSI, compare to 510 PSI)
- No need for specialized high pressure/high heat equipment or the large footprint of Bio-Oxidation
- Lower energy, less corrosion means less downtime and cheaper materials
- Mild acid as a catalyst, not a consumable, and a self-sustaining chain reaction
- Eliminates acid-forming potential of waste, removing key environmental liabilities
- Saves on energy, emissions, and enhances ESG project profile
- Byproduct (magnetite) can close the loop on localized steel recycling

Refractory ores are complex and particularly difficult to process for the recovery of metals, which are entrained as sub-microscopic particles inside the lattice of pyrite and arsenopyrite, primarily. Other processes used to recover metals in refractory ores utilize high heat (roasting), high pressure, long acid residency times, ultrafine grinding, or expensive, specialized equipment. These parameters contribute to high energy consumption and high CAPEX/OPEX, often making many refractory ore projects uneconomical. Moreover, the waste generated from pyritic ores is potentially acid-forming and represents environmental liabilities both for companies’ balance sheets and for communities.

EnviroGold Global’s NVRO Process operates at atmospheric pressure, relatively low heat using an exothermic reaction, and does not necessarily require fine grinds to optimize gold and silver recovery. It uses a two-stage acid leach with short, one-hour acid residency times in which the acid is a catalyst, and

therefore little of the acid is consumed in the reaction. An acid recycling circuit serves to help further minimize costs.

The process also completely neutralizes the acid-forming potential of the pyrites in refractory ore. This eliminates significant legacy environmental liabilities from existing tailings as well as new ore streams, offering owners with potentially acid-forming projects and waste stores an ESG and cost-savings opportunity. Following the completion of our proprietary leach, almost 99% of the original pyrite is oxidized and can then be neutralized to ferric oxyhydroxide—mineralogically goethite—which is inert and non-acid generating.

In addition to its economic and environmental benefits for the mining industry, the NVRO Process can also close the loop on steel recycling. The NVRO Process can convert the goethite to hematite, then maghemite, and finally magnetite, for separation into a product suited to pelletizing. These pellets are distributed steel mini-mills using electric arc furnaces, which significantly improves the economics and allows operators to effectively compete with large, high-emission conventional steel mills.

The NVRO Process was developed by EnviroGold Global's Chief Technology Officer ("CTO"), Brock Hill. It enhances the Company's growing intellectual property portfolio, adding to its suite of twenty filed patents and designs. Commenting on the patent filing, Mr. Hill said, "this patent is a hugely significant milestone for the company, and for the metals processing industry, really. It will greatly reduce the geological risk in developing an underutilized store of resources in refractory ore—not just gold and silver, but also strategic metals, which is absolutely required for the green energy revolution. It will also make the mining industry a safer partner for resource development—a win for the environment and a win for society."

EnviroGold Global will first apply the NVRO Process to refractory material at the Company's Hellyer Tailings Project, where independent analysis from the Company's flowsheet development partner, Core Resources, has demonstrated gold recovery rates >80% and silver recovery rates >90% for total project after-tax free cash flows of US\$ 350M ([link](#)). The application of the Company's proprietary technology to the Hellyer Tailings is expected result in the production of ~965,000 gold-equivalent ounces over an ~8yr project life through the liberation of precious metals, including gold and silver, and critical metals, including copper, lead and zinc. The Hellyer Tailings resource is well-studied with multiple JORC technical resource reports and an updated NI 43-101 mineral resource estimate (2022) on file.

EnviroGold Global is in advanced commercial negotiations with other owners of refractory mine tailings to apply the NVRO Process to the liberation of additional resources worldwide, and expects to announce at least one more definitive tailings reprocessing contract in 2022.

About EnviroGold Global

EnviroGold Global (CSE: NVRO) (OTCQB: ESGLF) (FSE: YGK), is a CleanTech company dedicated to creating shareholder value while establishing ESG & circular economy leadership by profitably reprocessing & remediating mine waste (tailings) to recover precious, critical & strategic metals – including gold, silver, copper & nickel. Led by CEO Dr. Mark Thorpe, the Company is strategically positioned to earn and maintain social license while capitalizing the estimated US\$ 3.4 trillion of in situ metal value in global tailings. Dr. Thorpe is also the Chairman of the Canadian Mining Innovation Council.

EnviroGold Global's commercial strategy involves applying proprietary and advanced technologies to resolve some of the world's most challenging waste related issues, while generating profits from the reclamation of resources. EnviroGold Global's commercial strategy is being developed in three distinct strategic horizons, with the Company's near-term focus on applying proprietary precious and critical metal liberation technology to the recovery of valuable materials from refractory mine tailings, where the Company has identified an accelerated route to generating high free cash flow beginning with the Company's Hellyer Tailings Reprocessing Project in 2023. There are over 280 billion metric tonnes of mine tailings on the earth's surface with a contained metal value that exceeds US\$3.4T. Leveraging a detailed, proprietary screening process, the Company's extensive market analysis has identified potential tailings targets with a contained value exceeding US\$10B, and has identified refractory, polymetallic, VMS tailings as a tailings sub-segment representing substantial and scalable economic opportunity. As EnviroGold Global successfully commercializes its metal liberation technology, the Company will expand its commercialization initiatives to include other, high-value waste reclamation and environmental remediation opportunities.

EnviroGold Global acquires the metal recovery rights to tailings sites by leveraging a profit share business model to create an attractive value proposition for site owners. The Company's business model is designed to generate high free-cash flow & high target IRR while eliminating the risks of traditional exploration and extraction. The Company expects to produce metals with a carbon footprint up to 96% lower than conventional metal producers while reducing the environmental footprint of legacy mining.

As of November 2022, the Company has eight major projects in its global project pipeline including two major projects under definitive contracts and six additional major projects at various stages of commercial negotiation and detailed technical/economic review.

The Company expects to commence production of precious metals (gold and silver), clean energy metals and battery metals (copper, lead, zinc) at its Australia project in 2023.

Further Information

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Forward Looking Statements

This news release contains “forward-looking statements” within the meaning of applicable securities laws, including, without limitation, earnings guidance, economic guidance, operational guidance and future capital spending amounts. All statements contained herein that are not clearly historical in nature may constitute forward-looking statements.

Graphical representations included in this news release are approximate representations which may vary from defined regulatory boundaries.

Generally, such forward-looking information or forward-looking statements can be identified by the use of forward-looking terminology such as “plans”, “expects” or “does not expect”, “is expected”, “budget”, “scheduled”, “estimates”, “forecasts”, “intends”, “anticipates” or “does not anticipate”, or “believes”, or variations of such words and phrases or may contain statements that certain actions, events or results “may”, “could”, “would”, “might” or “will be taken”, “will continue”, “will occur” or “will be achieved”. The forward-looking information and forward-looking statements contained herein include, but are not limited to, statements regarding the expected terms of the Hellyer Tailings Reprocessing Project and its completion, the Company’s working relationship with the owner(s) of the Hellyer Tailings, the economic viability of the Hellyer Tailings Reprocessing Project and statements regarding any residual precious metals as a by-product of the remediation, the Company’s expansion of its reprocessing pipeline, and the Company’s ability to accelerate the world’s transition to a circular resource economy. Forward-looking information in this news release are based on certain assumptions and expected future events, namely: the Company’s ability to continue as a going concern; the continued commercial viability and growth in the clean technology and mining waste reprocessing industry; continued approval of the Company’s activities by the relevant governmental and/or regulatory authorities; the continued development of clean technology and mining waste reprocessing technology; and the continued growth of the Company. These statements involve known and unknown risks, uncertainties and other factors, which may cause actual results, performance or achievements to differ materially from those expressed or implied by such statements, including but not limited to: the potential inability of the Company to continue as a going concern; the Company’s inability to accelerate the world’s transition to a circular resource economy, the risks associated with assessing metallurgical recovery rates from mine tailings and waste and related volumetric assessments, the risks associated with the mining and mining waste recycling industry in general; increased competition in the clean technology and waste reprocessing market; the potential unviability of the clean technology and mining waste reprocessing market; incorrect assessment of the value and potential benefits of various transactions; risks associated with potential governmental and/or regulatory action with respect to clean technology and mining waste reprocessing; risks associated with a potential collapse in the value of clean technology and waste reprocessing; and risks relating to the Company’s potential inability to expand its reprocessing pipeline.

Readers are cautioned that the foregoing list is not exhaustive. Readers are further cautioned not to place undue reliance on forward-looking statements, as there can be no assurance that the plans, intentions or expectations upon which they are placed will occur. Such information, although considered reasonable by management at the time of preparation, may prove to be incorrect and actual results may differ materially from those anticipated. Forward-looking statements contained in this news release are expressly qualified by this cautionary statement and reflect the Company’s expectations as of the date hereof and are subject to change thereafter. The Company undertakes no obligation to update or revise any forward-looking

statements, whether as a result of new information, estimates or opinions, future events or results or otherwise or to explain any material difference between subsequent actual events and such forward-looking information, except as required by applicable law.