FOR IMMEDIATE RELEASE
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BacTech Files Zero Tailings™ Patent in Canada and the United States, Converting Mining Waste into Fertilizer, Critical Minerals, and Industrial Products

National filings in Canada and the U.S. follow BacTech's original international patent application filed April 7, 2025, protecting a breakthrough process that converts sulphide and iron tailings into marketable products — producing zero waste.

TORONTO, ON — April 15, 2026 — BacTech Environmental Corporation, a leader in bioleaching-based mineral processing, today announced the national patent filings of its proprietary Zero Tailings™ technology in both Canada and the United States. The filings, made April 14, 2026, follow the company's original international (PCT) patent application filed on April 7, 2025, and represent a major step in commercializing a process that the company believes will fundamentally change how the global mining industry manages waste.

The mining industry generates hundreds of millions of tonnes of tailings — the residual slurries left behind after extracting primary metals — each year. These tailings ponds represent significant long-term environmental liabilities, including the risk of acid mine drainage and heavy-metal contamination. BacTech's Zero Tailings™ process is designed to eliminate this liability entirely.

How Zero Tailings™ Works

Zero Tailings™ combines BacTech's proven bioleaching technology with existing downstream processing technologies to put every element present in a tailing into solution — and then recover each element as a saleable product. Applied to sulphide and iron tailings, the process produces four principal product streams:

- **Magnetite** — high-purity iron oxide supplied to the steel and pigment industries;
- **Ammonium Sulphate Fertilizer** — a nitrogen-and-sulphur fertilizer suitable for broad agricultural markets;

- **Critical Minerals** — recovered in elemental form to supply clean-energy and advanced-manufacturing supply chains; and
- **Silica** — industrial-grade silicon dioxide for construction, electronics, and specialty chemical applications.

Because the process is designed to extract a product from every element present in the tailing, there is no residual waste stream — hence the name Zero Tailings™.

A Critical Answer to a Global Fertilizer Crisis

The timing of BacTech's Zero Tailings™ patent filings carries particular significance for global agriculture. Conflict in the Middle East has severely disrupted shipping through the Strait of Hormuz — a critical chokepoint through which an estimated 30 percent of globally traded fertilizer passed in 2024. The resulting supply shock has sent nitrogen fertilizer prices surging, with urea prices up as much as 49 percent and ammonia up approximately 20 percent since the disruption began, placing enormous pressure on farmers in North America and around the world.

BacTech's Zero Tailings™ process produces ammonium sulphate — a dual-nutrient fertilizer providing both nitrogen and sulphur — as a direct by-product of treating sulphide and iron tailings. Unlike conventional fertilizer production, which relies on natural gas feedstocks and long international supply chains, BacTech's ammonium sulphate is generated through a biological process applied to existing mining waste stockpiles. The result is a domestically producible, sustainably derived fertilizer that can be manufactured in Canada and the United States — independent of the geopolitical supply disruptions currently driving global food security concerns.

> *"While farmers are facing historic fertilizer costs driven by instability halfway around the world, BacTech is developing a process that produces ammonium sulphate fertilizer right here at home — from mine waste that already exists in our own backyard. That is the kind of supply chain resilience that North American agriculture urgently needs."*
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> **— Ross Orr, President & CEO, BacTech Environmental Corporation**

Ammonium sulphate produced through BacTech's bioleaching process is a biologically derived fertilizer, generated by naturally occurring bacteria rather than through energy-intensive conventional synthesis. This positions the product favourably with the growing segment of agricultural buyers and food producers seeking sustainable, traceable inputs — and potentially opens pathways for premium pricing in specialty and certified sustainable markets.

Converting a Liability Into a Product Portfolio

> *"Zero Tailings™ is exactly what its name implies — a future where mining leaves nothing behind. Filing in Canada and the United States underscores our commitment to protecting this technology in the markets where we intend to deploy it first. We are converting an industry liability into a portfolio of in-demand products,*

> *and these patent filings are a critical milestone in making that vision a commercial reality."*
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> **— Dr. Paul Miller, Chief Technology Officer, BacTech Environmental Corporation**

Strategic Significance of Canada and U.S. Filings

Canada and the United States represent two of the world's most significant mining jurisdictions, collectively hosting thousands of active and legacy tailings facilities. Both countries have enacted, or are advancing, regulatory frameworks that increase the financial burden on mine operators associated with tailings storage and long-term environmental monitoring. BacTech believes that Zero Tailings™ addresses these regulatory pressures directly by offering operators a path to full materials recovery and site remediation.

The national filings also position BacTech ahead of growing investor and regulatory demand for ESG-compliant mining practices. With critical mineral security a priority for both governments, a process that recovers those minerals from existing waste streams — rather than requiring new primary extraction — aligns directly with federal supply-chain strategies on both sides of the border.

Patent Timeline

April 7, 2025 — Original international (PCT) patent application filed for Zero Tailings™

April 14, 2026 — National phase filings submitted in Canada and the United States

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About BacTech Environmental Corporation

BacTech Environmental Corporation is a Toronto-based environmental technology company specializing in bioleaching solutions for the mining and remediation industries. The company's proprietary processes use naturally occurring bacteria to liberate metals and other elements from sulphide mineral matrices, enabling the recovery of value from materials that conventional metallurgy cannot process economically. BacTech is focused on delivering commercially viable, environmentally responsible solutions that eliminate tailings, remediate contaminated sites, and supply critical minerals to global markets.

For Further Information:

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This press release contains forward-looking statements. Actual results may differ materially from those projected.
Zero Tailings™ is a trademark of BacTech Environmental Corporation.

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