UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16 UNDER THE SECURITIES EXCHANGE ACT OF 1934

For the month of October 2023

Commission File Number: 001-39989

PYROGENESIS CANADA INC.

(Translation of registrant's name into English)

1744, William St. Suite 200 Montreal, QC, H3J1R4 Canada

(Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F. Form 20-F [] Form 40-F [X]

On October 24, 2023, the Registrant issued a press release, a copy of which is attached hereto as Exhibit 99.1 and is incorporated herein by reference.

EXHIBIT INDEX

Exhibit Number Description

99.1 Press Release dated October 24, 2023

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

PYROGENESIS CANADA INC.
(Registrant)

Date: October 24, 2023 /s/ P. Peter Pascali P. Peter Pascali Chief Executive Officer

PyroGenesis Announces \$360,000 Initial Contract for a Plasma-Based PACWAD System for Chemical Warfare Waste Destruction

Helping European Union Sappers Eliminate Legacy Weapons

MONTREAL, Oct. 24, 2023 (GLOBE NEWSWIRE) -- PyroGenesis Canada Inc. (http://pyrogenesis.com) (TSX: PYR) (NASDAQ: PYR) (FRA: 8PY) a high-tech company ("Company" or "PyroGenesis") that designs, develops, manufactures and commercializes advanced plasma processes and sustainable solutions which are geared to reduce greenhouse gases (GHG) and address environmental pollutants, is pleased to announce the receipt of an initial contract valued at 250,000 € (approximately CA\$360,000) (the "Contract") from a European engineering services firm (the "Client") undertaking the discovery and safe destruction of chemical warfare agents with the European Union. The contract includes a 45% upfront payment of the total contract value, or 112,500 € (approximately CA\$160,000), which has already been received.

Under this agreement, as part of a potential three-phase project PyroGenesis will first provide a lab-scale size plasma arc chemical warfare agent destruction system (the "PACWADS") as part of a multi-partner project aimed at identifying, extracting, and disposing of chemical munitions and chemical warfare agents residing in active marine passageways and corridors. The second phase will consist of testing the system to validate its efficiency, performance and capacity. The eventual goal is to develop a full-scale system once results from the lab-scale system are reviewed.

The mobility of the PACWADS was key to ensure the applicability of this type of the project, as safe destruction at sea is fundamental to the initiative's goals of protecting the marine environment and reducing further potential damage caused by transportation of the toxic chemicals to land for processing.

The Client, a provider of geotechnical and geophysical services, is one of several participant companies (including teams from national Naval units) involved in the project, while the over-arching initiative is being funded by various regional development funds and government programs within the European Union.

"This important initiative will help maintain safe waters for marine transit and for the safe development of offshore projects such as wind farms that require contact with the seabed," said Mr. P. Peter Pascali, President & CEO of PyroGenesis. "Our clean plasma-based waste destruction systems have been proven both on land and at sea, most notably with the US Navy, where our systems are <u>in use on the USS Gerald R. Ford</u>, the largest aircraft carrier ever built, in addition to three additional systems which have already been purchased for installation on US aircraft carriers <u>under development</u>."

<u>PyroGenesis' PACWADS</u> is a safe, versatile, and efficient mobile destruction system, that uses high temperature electric plasma to eliminate a variety of dangerous chemical and biological warfare agents, including sarin, mustard gas, soman, and VX. With a 99.999% (or 6N) destruction efficiency, the PACWADS leaves only a non-toxic salt effluent that can be safely released at sea. These systems are typically designed for use in the field or near conflict zones, and they serve several key purposes, including protecting human lives, environmental preservation, compliance with international treaties, operational efficiency, and mobility.

The Company's development of plasma torches for use in the safe destruction of hazardous chemicals such as toxic chemical warfare agents is part of the Company's <u>three-tiered solution ecosystem</u> that aligns with economic drivers that are key to global heavy industry. Plasma torches as a waste destruction application are part of the Company's **Waste Remediation** tier, encompassing the safe destruction of hazardous materials, and the recovery and valorization of underlying substances such as chemicals and minerals.

About PyroGenesis Canada Inc.

PyroGenesis Canada Inc., a high-tech company, is a proud leader in the design, development, manufacture and commercialization of advanced plasma processes and sustainable solutions which reduce greenhouse gases (GHG) and are economically attractive alternatives to conventional "dirty" processes. PyroGenesis has created proprietary, patented and advanced plasma technologies that are being vetted and adopted by multiple multibillion dollar industry leaders in four massive markets: iron ore pelletization, aluminum, waste management, and additive manufacturing. With a team of experienced engineers, scientists and technicians working out of its Montreal office, and its 3,800 m² and 2,940 m² manufacturing facilities, PyroGenesis maintains its competitive advantage by remaining at the forefront of technology development and commercialization. The operations are ISO 9001:2015 and AS9100D certified, having been ISO certified since 1997. For more information, please visit: www.pyrogenesis.com.

Cautionary and Forward-Looking Statements

This press release contains "forward-looking information" and "forward-looking statements" (collectively, "forward-looking statements") within the meaning of applicable securities laws. In some cases, but not necessarily in all cases, forward-looking statements can be identified by the use of forward-looking terminology such as "plans", "targets", "expects" or "does not expect", "is expected", "an opportunity exists", "is positioned", "estimates", "intends", "assumes", "anticipates" or "does not anticipate" or "believes", or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might", "will" or "will be taken", "occur" or "be achieved". In addition, any statements that refer to expectations, projections or other characterizations of future events or circumstances contain forward-looking statements. Forward-looking statements are not historical facts, nor guarantees or assurances of future performance but instead represent management's current beliefs, expectations, estimates and projections regarding future events and operating performance.

Forward-looking statements are necessarily based on a number of opinions, assumptions and estimates that, while considered reasonable by the Company as of the date of this release, are subject to inherent uncertainties, risks and changes in circumstances that may differ materially from those contemplated by the forward-looking statements. Important factors that could cause actual results to differ, possibly materially, from those indicated by the forward-looking statements include, but are not limited to, the risk factors identified under "Risk Factors" in the Company's latest annual information form, and in other periodic filings that the Company has made and may make in the future with the securities commissions or similar regulatory authorities, all of which are available under the Company's profile on SEDAR+ at www.sedarplus.com, or at www.sec.gov. These factors are not intended to represent a complete list of the factors that could affect the Company. However, such risk factors should be considered carefully. There can be no assurance that such estimates and assumptions will prove to be correct. You should not place undue reliance on forward-looking statements, which speak only as of the date of this release. The Company undertakes no obligation to publicly update or revise any forward-looking statement, except as required by applicable securities laws

Neither the Toronto Stock Exchange, its Regulation Services Provider (as that term is defined in the policies of the Toronto Stock Exchange) nor the NASDAQ Stock Market, LLC accepts responsibility for the adequacy or accuracy of this press release.

For further information please contact:

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