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 August 2022

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]
Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):
Note: Regulation S-T Rule 101(b)(1) only permits the submission in paper of a Form 6-K if submitted solely to provide an attached annual report to security holders.
Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):
Note: Regulation S-T Rule 101(b)(7) only permits the submission in paper of a Form 6-K if submitted to furnish a report or other document that the registrant foreign private issuer must furnish and make public under the laws of the jurisdiction in which the registrant is incorporated, domiciled or legally organized (the registrant's "home country"), or under the rules of the home country exchange on which the registrant's securities are traded, as long as the report or other document is not a press release, is not required to be and has not been distributed to the registrant's security holders, and, if discussing a material event, has already been the subject of a Form 6-K submission or other Commission filing on EDGAR.

On August 31, 2022, 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 August 31, 2022

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: August 31, 2022 /s/ P. Peter Pascali P. Peter Pascali

Chief Executive Officer

PyroGenesis Announces Commencement of In-Factory Audit of its NexGenTM Metal Powder Production Facility by Top Tier North American Global Aerospace Company

MONTREAL, Aug. 31, 2022 (GLOBE NEWSWIRE) -- PyroGenesis Canada Inc. (http://pyrogenesis.com) (TSX: PYR) (NASDAQ: PYR) (FRA: 8PY), a high-tech company (hereinafter referred to as the "Company" or "PyroGenesis"), that designs, develops, manufactures and commercializes advanced plasma processes, high quality plasma atomized metal powder for 3D printing and additive manufacturing, and sustainable solutions which are geared to reduce greenhouse gases (GHG), is pleased to announce today that, further to its press release dated July 18th, 2022 and Outlook section of its Q2 2022 Financial Results press release, a tier one North American global aerospace company (the "Client") will, in September, be conducting an in-person powder production audit at PyroGenesis' metal powder production facility in Montreal, a significant step in a previously announced qualification agreement.

"After many months of document review and process improvements, we are now proud and honored to be showcasing our facility, our staff, and our groundbreaking process to this major international corporation – a legendary company who continues to be a world leader in design, engineering, and manufacturing of airplanes and aerospace technology," said Mr. P. Peter Pascali, CEO and Chair of PyroGenesis. "We have all worked extremely hard to reach this point. In our opinion, this is one of the most important and critical steps in our powder production qualification."

This on-site, in-person powder production audit is part of the final phase of the qualification process which has spanned over 18 months of investigative rigor by the Client. This portion of the audit will consist mainly of a facilities and operations assessment, during which PyroGenesis' technicians and operators will demonstrate the reliability of the Company's cutting-edge metal powder production facility and work instruction processes. The in-person audit is formally scheduled to take place in September. The exact date will not be disclosed for confidentiality reasons.

Upon successful completion of this in-person audit, the last step will include providing final powder samples to test specific mechanical and chemical properties. Once all steps are completed and testing is finished, PyroGenesis' process will be locked down and ready to receive commercial orders; no further changes will be allowed. Furthermore, the Client will certify the company's metal powders for use by the customer and its component suppliers. The formal and methodical process with this leading aerospace company is anticipated to achieve final approval towards the end of this year.

"As we have stated in the past, given our unique manufacturing process that improves exponentially on the world's existing leading metal powder production process – which we invented 25 years ago – using high temperature plasma atomization, we expect to be in a position to capture a significant share of the overall titanium powder market," said Mr. Massimo Dattilo, VP, PyroGenesis Additive. "We are confident that our NexGen metal powder production system, a single-step process that is unique in that it uses wire as a direct feedstock for significant gains in production speed and particle size control, will meet or surpass Client expectations, both over the next two weeks during the on-site audit, and beyond."

Separately, as previously announced, the company continues to pursue a strategy to build and operate a metal powder manufacturing facility in Europe to address the anticipated parallel growth in the European market. Management has already initiated serious discussions with potential partners and is actively analyzing this opportunity. The Company will provide more information on this development as events develop.

About PyroGenesis Canada Inc.

PyroGenesis Canada Inc., a high-tech company, is a 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.

This press release contains certain forward-looking statements, including, without limitation, statements containing the words "may", "plan", "will", "estimate", "continue", "anticipate", "intend", "expect", "in the process" and other similar expressions which constitute "forward-looking information" within the meaning of applicable securities laws. Forward-looking statements reflect the Company's current expectation and assumptions and are subject to a number of risks and uncertainties that could cause actual results to differ materially from those anticipated. These forward-looking statements involve risks and uncertainties including, but not limited to, our expectations regarding the acceptance of our products by the market, our strategy to develop new products and enhance the capabilities of existing products, our strategy with respect to research and development, the impact of competitive products and pricing, new product development, and uncertainties related to the regulatory approval process. Such statements reflect the current views of the Company with respect to future events and are subject to certain risks and uncertainties and other risks detailed from time-to-time in the Company's ongoing filings with the securities regulatory authorities, which filings can be found at https://www.sedar.com/ or at https://www.sec.gov/. Actual results, events, and performance may differ materially. Readers are cautioned not to place undue reliance on these forward-looking statements. The Company undertakes no obligation to publicly update or revise any forward-looking statements either as a result of new

information, future events or otherwise, 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.

SOURCE PyroGenesis Canada Inc.

For further information please contact:

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Phone: (514) 937-0002, E-mail: ir@pyrogenesis.com RELATED LINK: http://www.pyrogenesis.com/