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

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): **October 23, 2025**

ASP Isotopes Inc.

(Exact name of registrant as specified in its charter)

Delaware	**001-41555**	**87-2618235**
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

601 Pennsylvania Avenue NW, South Building, Suite 900 Washington, DC	**20004**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(202) 756-2245**

Not Applicable
(Former name or former address, if changed since last report.)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.01	**ASPI**	**The Nasdaq Stock Market LLC**

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act ☐

Item 8.01. Other Events.

On October 23, 2025, ASP Isotopes Inc. (the "Company") issued a press release announcing that the Company's subsidiary, Quantum Leap Energy LLC, an advanced nuclear fuels company dedicated to the development of technology and processes across critical segments of the nuclear fuel cycle, has completed the purchase of certain assets from One 30 Seven Inc. to advance solutions for the processing of nuclear waste. A copy of the press release is attached to this Current Report on Form 8-K as Exhibit 99.1 and is incorporated herein by reference, other than the ninth paragraph of the press release.

Item 9.01. Financial Statements and Exhibits.

Exhibit No.	Description
99.1	Press Release, dated October 23, 2025, of ASP Isotopes Inc. announcing Quantum Leap Energy LLC has completed the acquisition of One 30 Seven Inc. assets to advance solutions for the processing of nuclear waste.
104	Cover Page Interactive Date File (embedded within the Inline XBRL document)

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 hereunto duly authorized.

ASP ISOTOPES INC.

Date: October 23, 2025

By: */s/ Donald G. Ainscow*
Name: Donald G. Ainscow
Title: Executive Vice President,
General Counsel and Secretary

Quantum Leap Energy LLC Completes the Acquisition of One 30 Seven Inc. Assets to Advance Solutions for the Processing of Water-Soluble Nuclear Waste

- Quantum Leap Energy LLC plans to utilize technology acquired from One 30 Seven to develop Creber Units to process water-soluble nuclear waste by accelerating beta decay of radioactive waste, such as Cesium-137 and Strontium-90.

- There are currently 390,000 Metric Tons of radioactive waste globally, of which over 90,000 Metric Tons sit in the United States. [1]

- The total estimated liability for the Department of Energy failing to dispose of commercial spent fuel was estimated at $44.5 billion in 2024, not including funds already paid out. [2]

- After this acquisition, Quantum Leap Energy intends to operate in several critical segments of the nuclear fuel cycle, including Conversion, Deconversion, Enrichment, and Nuclear Waste processing.

WASHINGTON, October 23, 2025 (GLOBE NEWSWIRE) –ASP Isotopes, Inc. NASDAQ: ASPI ("ASP Isotopes" or the "Company") today announced that its subsidiary, Quantum Leap Energy LLC ("Quantum Leap Energy" or "QLE"), an advanced nuclear fuels company dedicated to the development of technology and processes across critical segments of the nuclear fuel cycle, has completed the purchase of certain assets from One 30 Seven Inc., a Canadian company engaged in the business of researching and developing decontamination solutions for water-soluble nuclear waste, particularly radioactive waste from radioactive materials from nuclear power plants, radiopharmaceuticals, and military sources.

Quantum Leap Energy acquired substantially all of the assets of One 30 Seven, including an international patent application and its related rights for a system and method for treating radioactively contaminated water. Quantum Leap Energy also engaged B-Con Engineering Inc., a company affiliated with One 30 Seven, to develop water-soluble nuclear waste decontamination solutions based on the acquired patent that process water-soluble nuclear waste by accelerating beta decay of radioactive waste, such as Cesium-137 and Strontium-90. The goal of the acquisition of One30Seven is to increase the vertical integration of QLE's business in the nuclear fuel cycle.

Currently, the Department of Energy is responsible for managing all nuclear waste created by commercial and public reactors and pays a processing fee to current reactor owners to store the fuel on behalf of the Department of Energy. The total estimated liability for the Department of Energy failing to dispose of commercial spent fuel was estimated at $44.5 billion in 2024, not including funds already paid out. [2]

It is estimated that there are currently 390,000 Metric Tons of radioactive waste globally. [1] Roughly 3% of the total nuclear waste volume is considered High-Level Waste (HLW). HLW, although a small amount of total volume contains 95% of the radioactivity in nuclear waste. [1] Using the technology acquired from One30Seven we believe QLE will be able to develop proprietary nuclear waste decontamination solutions called Creber Units that accelerate the beta decay of this HLW and rapidly convert these long half-life isotopes into stable isotopes. The reduction of HLW reduces radioactive impact on the environment and reduces the liability of storing nuclear waste. The removal of HLW also allows for other non-HLW isotopes to be utilized for recycling and reprocessing in nuclear reactors.

The Creber Unit solutions come in four planned sizes (Micro, Mini, Midi, and Maxi sizes) and are designed to allow for a modular approach and projected appropriate capital spending commitments and shorter timelines to revenue generation. The Creber Unit solutions allow for a mobile solution as well facilitating emergency response to nuclear waste situations.

QLE's first targeted nuclear waste isotope for the Creber unit will be Cesium-137, which decays into stable Barium-137. The use of high-purity Barium-137 is emerging as a critical enabler of ion-trap quantum computing, one of the leading approaches to building large-scale quantum machines.

Processing Nuclear Waste is considered to be a highly regulated process and will require a regulatory review in any country in which QLE operates to begin testing its technology. This includes working with the Nuclear Regulatory Commission (NRC), Department of Energy (DOE), Nuclear Waste Services (NWS), and other global regulators.

Commenting on the Combination, Ryno Pretorius, CEO of Quantum Leap Energy, said:

"*This acquisition represents a transformative effort to tackle the global challenge of nuclear waste, harnessing the expertise of Brian Creber and his team to develop the Creber Unit solutions for water-soluble nuclear waste processing over the next eighteen months. This initiative promises to reduce the environmental burden of the vast quantities of radioactive waste worldwide, particularly high-level waste, by advancing solutions that could stabilize hazardous isotopes, thereby safeguarding ecosystems and public health for generations to come. Through collaboration with regulatory bodies and the application of innovative technology, this partnership aims to alleviate the economic and ecological pressures faced by entities like the U.S. Department of Energy, fostering a sustainable future on a global scale.*"

Transaction Overview

Effective October 21, 2025, Quantum Leap Energy LLC (QLE) acquired substantially all assets of One30Seven Inc., a Canadian company specializing in decontamination solutions for radioactive waste from nuclear power plants, radiopharmaceuticals, and military sources. The assets include intellectual property assets, such as an international patent application and its related rights for a system and method to treat radioactively contaminated water. This acquisition is intended to advance the development of Creber Micro, Mini, Midi, and Maxi Units and allow QLE to offer Nuclear Waste processing solutions.

The upfront purchase price for the assets is comprised of a cash payment of $150,000 and 266,113 shares of ASPI common stock (determined by dividing $2,850,000 by a 30-day volume-weighted average price (VWAP) of ASPI common stock). Under the terms of the purchase agreement, One 30 Seven has the opportunity to earn additional consideration as follows: (i) upon the completion of a validated and operational Creber Mini Unit, an amount equal to $6,000,000, which is potentially payable in cash, shares of ASPI's common stock or shares of QLE's common equity; and (ii) upon the completion of a validated and operational Creber Midi Unit or Maxi Unit, an amount equal to $11,000,000, which is potentially payable in cash, shares of ASPI's common stock or shares of QLE's common equity.

QLE also entered into a consulting agreement with B-Con Engineering Inc., led by inventor Brian Creber, to develop and validate the functional operation of a Creber Mini Unit at an estimated cost of $4.5 million over 18 months, followed by either a Midi or Maxi Unit at approximately $12.5-13 million over another 18 months. QLE has agreed to fund the project through quarterly advances, with acceptance testing and monthly reporting to ensure milestones are met.

QLE also entered into a royalty agreement with One30Seven pursuant to which QLE agreed to pay a 6.0% royalty on net revenues from product sales or licensing for 15 years per product, starting from the first commercial sale. The royalty agreement will terminate if the commercialization of a Creber Unit is not achieved by the fourth anniversary of closing.

[1] https://world-nuclear.org/information-library/nuclear-fuel-cycle/nuclear-waste/radioactive-waste-management

[2] https://www.ans.org/news/article-6587/us-spent-fuel-liability-jumps-to-445-billion/

Forward Looking Statements

This press release contains "forward-looking statements" within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based only on our current beliefs, expectations, and assumptions regarding the future of our business, future plans and strategies, projections, anticipated events and trends, the economy, and other future conditions. Forward-looking statements can be identified by words such as "goal", "target", "believes," "plans," "anticipates," "expects," "aims", "intends", "estimates," "projects," "will," "may," "might," "seeks", "sees", "should," "would," "expect," "positioned," "strategy," and words of a similar nature. Examples of forward-looking statements include, among others but are not limited to, statements relating to the completion of the development of nuclear fuel processing solutions in the anticipated timeframe or at all, the integration of QLE's and One 30 Seven's businesses and the ability to recognize the anticipated synergies and benefits of the transactions, the anticipated market demand for QLE's future nuclear fuel processing solutions, and the company's discussions with nuclear regulators, and statements we make regarding expected operating results, such as future revenues and prospects from the potential commercialization of isotopes, future performance under contracts, and our strategies for product development, engaging with potential customers, market position, and financial results. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks, and changes in circumstances that are difficult to predict, many of which are outside our control. Our actual results, financial condition, and events may differ materially from those indicated in the forward-looking statements based upon a number of factors. Forward-looking statements are not a guarantee of future performance or developments. You are strongly cautioned that reliance on any forward-looking statements involves known and unknown risks and uncertainties. Therefore, you should not rely on any of these forward-looking statements. There are many important factors that could cause our actual results and financial condition to differ materially from those indicated in the forward-looking statements, including, but not limited to, risks related to the factors disclosed in Part I, Item 1A. "Risk Factors" of the company's Annual Report on Form 10-K for the fiscal year ended December 31, 2024 and any amendments thereto and in the company's subsequent reports and filings with the U.S. Securities and Exchange Commission. Any forward-looking statement made by us in this press release is based only on information currently available to us and speaks only as of the date on which it is made. We undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future developments or otherwise. No information in this press release should be interpreted as an indication of future success, revenues, results of operation, or stock price. All forward-looking statements herein are qualified by reference to the cautionary statements set forth herein and should not be relied upon.

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