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ASP Isotopes Inc. Completes Construction Phase of Ytterbium-176 Enrichment Facility

- The Company has completed the construction phase of the first Quantum Enrichment plant for Ytterbium-176, approximately nine months ahead of the original schedule.

- The Company expects to offer highly enriched Ytterbium-176 for commercial sale during 2025 after completion of the commissioning phase.

- The Company announces the hiring of Lt. Col. William (Bill) Eden, MBE, who will lead the Company's nuclear fuel operations in the United Kingdom.

WASHINGTON, Sept. 03, 2024 (GLOBE NEWSWIRE) -- ASP Isotopes Inc. NASDAQ: ASPI ("ASP Isotopes" or the "Company"), an advanced materials company dedicated to the development of technology and processes for the production of isotopes for use in multiple industries, today announced advances in its construction program and the hiring of key staff.

Ytterbium-176 Enrichment Facility

The Company's Ytterbium-176 enrichment facility will be the Company's third enrichment facility in South Africa and its first isotope enrichment facility to utilize Quantum Enrichment, a novel laser method of enrichment. The Company believes that this novel laser-based enrichment method promises affordability, lower production costs, and efficient construction, relative to other older generation methods of isotope enrichment. Construction of the Ytterbium-176 facility was originally planned to conclude during mid-2025; however, the team has managed to accelerate its construction timeline by approximately nine months.

Following a commissioning phase, this facility is expected to produce commercial quantities of highly enriched Ytterbium-176 for sale during 2025. Ytterbium-176 (^{176}Yb) is a key stable isotope used in the production of Lutetium-177 (^{177}Lu). Lutetium-177 is an emerging beta emitting radiopharmaceutical used in oncology drugs such as Novartis' Pluvicto. There are currently two FDA approved drugs and more than 66 ongoing clinical trials for drugs that require Lutetium-177.

Consensus forecasts for Novartis' Pluvicto exceed $4 billion and the beta emitting radiopharmaceutical market is expected to exceed $15 billion per annum in the next decade.(1) The supply chain for this radioisotope has been particularly challenged with recent industry reports highlighting over two months treatment delay due to lack of drug availability.(2) The Company believes that the only supplier of commercial quantities of Ytterbium-176 is Rosatom, the Russian state-owned entity. The Company is in discussions

with multiple potential customers and aims to offer commercial supplies of Ytterbium-176 during 2025.

"*Currently, there exist significant supply-side challenges for many essential radioisotopes used in various oncology treatments. We have received a considerable amount of interest from customers in North America, Europe and Asia for Ytterbium-176 and we look forward to easing supply chains and improving the quality of life of thousands of patients every year*", said Paul Mann, ASP Isotopes Inc.'s Chairman and CEO.

Global Leader of ASPI's U.K. Nuclear Strategy

The Company has recruited Lt. Col. William (Bill) Eden, MBE to lead the Company's U.K. nuclear strategy. Bill's 27-year career in the U.K. Army has involved serving two tours in Afghanistan, as well as serving as the British Army's strategic liaison officer at The Pentagon, U.S.A and as a planning officer at NATO. He is currently serving within Land Command in the U.K. and expects to retire from the U.K. Army during 4Q 2024. Prior to joining the U.K. Army, Bill graduated from Cambridge University with an M.A. (Cantab) in Natural Sciences. Lt. Col Eden is expected to assume his responsibilities during the fourth quarter 2024.

"*Bill's leadership skills, experience in managing operations, 'complex projects and programmes, supply chains, logistics and security, as well as his experience of interacting with multiple governments and stake holders, makes him the ideal person to advance our nuclear strategy in the United Kingdom*", said Paul Mann, Chairman and CEO of QLE.

"*Following a highly fulfilling and exciting career in His Majesty's Armed Forces, I look forward to moving onto new challenges. The world is currently suffering from a great many supply chain issues that might prevent us from meeting 2050 climate goals. I look forward to helping solve some of these, improving energy security and assisting the U.K. in expanding its leadership position in nuclear energy*", said Lt. Col. Bill Eden.

The U.K. is one of many countries that have pledged to triple the amount of nuclear power by 2050. The U.K. has committed to deploy up to 24GW of nuclear power by 2050.[(3)] Basic nuclear fuels (e.g., low-enriched uranium) are currently supplied by a limited number of companies, and supply chains have been challenged for numerous years. Recent geopolitical events have highlighted the urgent need for additional investment into the nuclear fuel supply chain. For example, in May 2024, Russia's state-owned uranium supplier, Tenex, notified its US customers of a potential force majeure event following a law recently signed by President Biden that bars imports of Russian nuclear fuel.

The Company is evaluating the potential opportunity to construct an advanced nuclear fuel plant in the United Kingdom, which would likely result in the inward investment of hundreds of millions of dollars from Quantum Leap Energy LLC and its partners and customers. The advanced nuclear fuel plant would likely create hundreds of permanent jobs in the United Kingdom. ASP Isotopes has previously announced that it has entered into two MOUs with U.S.-based Small Modular Reactor (SMR) companies that contemplate the SMR companies making capital investments into the development of high-assay low-enriched uranium (HALEU) enrichment facilities. Potential customers, with whom ASP Isotopes has been in discussions, have indicated their requirements of over $37 billion of HALEU by 2037.

We believe HALEU will be required for the nuclear fuel component for the new generation of nuclear reactors, such as SMRs (small modular reactors), that are now under development for commercial and government uses. Currently, there are no Western producers of HALEU in commercial quantities, and many SMR companies worldwide face substantial delays until this fuel supply issue is resolved. The Nuclear Energy Institute estimates that there may be a HALEU supply shortage of approximately 3,000 metric tons by 2035. [(4)] However, based on discussions with and the interest received from potential customers, the Company believes this figure may be significantly larger.

Inducement Grant

In connection with his appointment, effective as of his employment start date, the Company granted Mr. Eden 200,000 shares of the Company's common stock. Subject to Mr. Eden being continuously employed by the Company through each applicable vesting date, the shares will vest in eight equal instalments over four years, with 25,000 shares vesting on each of the six-month anniversaries of Mr. Eden's employment start date. This restricted stock award was approved by the Company's Compensation Committee and granted under the Company's 2024 Inducement Equity Incentive Plan as an inducement material to Mr. Eden entering into employment with ASP Isotopes, in accordance with Nasdaq Listing Rule 5635(c)(4). The Company is providing this information in accordance with Nasdaq Listing Rule 5635(c)(4).

(1) Lutetium-177 (Lu-177) Market Size, Scope And Forecast Report (marketresearchintellect.com)
(2) Ravi et al, Clinical Implementation of 177Lu-PSMA-617 in the United States: Lessons Learned and Ongoing Challenges; J Nuc Med March 2023, 64 (3) 349-350
(3) UK releases roadmap to quadruple nuclear energy capacity : Nuclear Policies - World Nuclear News (world-nuclear-news.org)
(4) NEI-Letter-for-Secretary-Granholm_HALEU-2021.pdf

About ASP Isotopes Inc.

ASP Isotopes Inc. is a pre-commercial stage advanced materials company dedicated to the development of technology and processes to produce isotopes for use in multiple industries. The Company employs proprietary technology, the Aerodynamic Separation Process ("ASP technology"). The Company's initial focus is on producing and commercializing highly enriched isotopes for the healthcare and technology industries. The Company also plans to enrich isotopes for the nuclear energy sector using Quantum Enrichment technology that the Company is developing. The Company has isotope enrichment facilities in Pretoria, South Africa, dedicated to the enrichment of isotopes of elements with a low atomic mass (light isotopes).

There is a growing demand for isotopes such as Silicon-28, which will enable quantum computing, and Molybdenum-100, Molybdenum-98, Zinc-68, Ytterbium-176, and Nickel-64 for new, emerging healthcare applications, as well as Chlorine-37, Lithium-6, and Uranium-235 for green energy applications. The ASP Technology (Aerodynamic Separation Process) is ideal for enriching low and heavy atomic mass molecules. For more information, please visit www.aspisotopes.com.

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, including, without limitation, statements relating to the development of new technology for the enrichment of nuclear isotopes, the commencement of supply of isotopes to customers, and the construction of additional enrichment facilities. 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 “believes,” “plans,” “anticipates,” “expects,” “estimates,” “projects,” “will,” “may,” “might,” and words of a similar nature. Examples of forward-looking statements include, among others but are not limited to, 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 our reliance on the efforts of third parties; our ability to complete the construction and commissioning of our enrichment plants or to commercialize isotopes using the ASP technology or the Quantum Enrichment Process; our ability to obtain regulatory approvals for the production and distribution of isotopes; the financial terms of any current and future commercial arrangements; our ability to complete certain transactions and realize anticipated benefits from acquisitions; contracts, dependence on our Intellectual Property (IP) rights, certain IP rights of third parties; and the competitive nature of our industry. 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. This press release includes market and industry data and forecasts that we obtained from internal research, publicly available information and industry publications and surveys. Industry publications and surveys generally state that the information contained therein has been obtained from sources believed to be reliable. Unless otherwise noted, statements as to our potential market position relative to other companies are approximated and based on third-party data and internal analysis and estimates as of the date of this press release. We have not independently verified this information, and it could prove inaccurate. Industry and market data could be wrong because of the method by which sources obtained their data and because information cannot always be verified with certainty due to the limits on the availability and reliability of raw data, the voluntary nature of the data-gathering process and other limitations and uncertainties. In addition, we do not know all of the assumptions regarding general economic conditions or growth that were used in preparing the information and forecasts from sources cited herein. 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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