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ASP Isotopes Inc. enters into Memorandum of Understanding with the South African Nuclear Energy Corporation (Necsa) to collaborate on the research, development and construction of an Advanced Nuclear Fuel Production Facility

- Necsa is an RSA state-owned company responsible for undertaking and promoting R&D in the field of nuclear energy.

- MOU contemplates collaboration on the research, development and ultimately the commercial production of advanced nuclear fuels, such as High Assay Low Enriched Uranium (HALEU) for Small Modular Reactors.

- It is anticipated that these activities will be conducted at Pelindaba, which is South Africa's main nuclear research center and the home of the SAFARI-1 nuclear reactor.

WASHINGTON, Nov. 14, 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 that it has entered into a Memorandum of Understanding (MOU) with The South African Nuclear Energy Corporation (Necsa) to collaborate on the research, development and ultimately the commercial production of advanced nuclear fuels.

Necsa is a state-owned company established by the Republic of South Africa Nuclear Energy Act in 1999 with a mandate to undertake and promote research and development in the field of nuclear energy and radiation sciences. Necsa is also responsible for processing source material, and co-operating with other institutions on nuclear and related matters.

The proposed structure under discussion for the delivery of the objectives of the MOU contemplates the formation of a new entity in South Africa with a board of directors consisting of at least two representatives from ASPI and Necsa. Discussions between the parties during the last three years have focused on advancing new nuclear fuel to cater especially for small modular reactors as a start and eventually the construction of a nuclear fuel facility for the production of HALEU.

It is anticipated that the research, development and ultimate construction of a HALEU production facility will take place at Pelindaba, which is situated approximately 22 miles west of Pretoria, South Africa. Pelindaba is South Africa's main nuclear research center and is the

home of the 20MW research nuclear reactor, SAFARI-1, which over the last several years has become one of the world's largest suppliers of Molybdenum-99 and other radioisotopes.

The MOU was signed at a signing ceremony that took place at Pelindaba on November 14, 2024. Mr Paul Mann, Chairman and CEO of ASP Isotopes, signed on behalf of ASP Isotopes and Mr Loyiso Tyabashe, Group CEO of Necsa, signed on behalf of Necsa. The signing ceremony was attended by representatives of the South African Government and included the participation of Minister Kgosientsho Ramokgopa, South Africa's newly appointed Minister of Electricity and Energy.

During the signing ceremony, Necsa GCEO, Mr Loyiso Tyabashe remarked, "*The memorandum signifies the commitment of both Necsa and ASP Isotopes to bring essential nuclear fuels to the world. It is particularly important for South Africa as nuclear technology is set to take its rightful place in ensuring energy security thus enabling economic growth, decarbonisation and much-needed jobs. The MOU paves the way for Necsa to re-establish its capability for nuclear fuel production and supply. I believe that this collaboration will enhance the technological capabilities of both parties and foster a long-lasting and mutually beneficial partnership in the field of nuclear technology*"

Paul Mann, Chairman and CEO of ASP Isotopes, and Chairman and CEO of QLE commented that "*Over the last several decades, scientists at South Africa's leading Universities and more recently at ASP Isotopes have developed some of the world's most advanced isotope enrichment technologies. Nuclear fuel has one of the most severely compromised supply chains of any material in the World. The World is in urgent need of additional suppliers*. *This partnership with Necsa will enable us to accelerate the construction of an advanced nuclear fuel facility.*" He continued "*This proposed partnership with Necsa is designed to re-establish South Africa as a leader in Nuclear Engineering producing the advanced nuclear fuels that the world requires to prevent climate change. It will also mobilize hundreds of workers in local regions to build and operate the new manufacturing plant and support thousands of direct and indirect jobs across a nationwide manufacturing supply chain*."

ASPI recently entered into a Term Sheet with TerraPower LLC which contemplates TerraPower providing funding for the construction of a HALEU Facility and TerraPower purchasing HALEU produced at the facility.

During the next 30 years, global energy consumption will likely double[(1)]. To meet 2050 climate goals, this must occur with a zero increase in carbon emissions. The advanced nuclear fuels required during the next 50 years are expected to differ significantly from those used in the last 50 years. Specifically, many small modular and advanced reactors in the future are expected to require HALEU. The Company has received interest from potential customers who collectively require over $37 billion of HALEU between the present day and 2037, at current market prices[(2)].

The Company believes that its enrichment technologies can be deployed in a new HALEU facility for considerably lower capital costs, and in much less time, compared to the construction of an enrichment facility using a traditional centrifuge process. The Company has already constructed or is in the process of constructing three isotope enrichment facilities in South Africa. The first facility is expected to enrich Carbon-14 for use in

healthcare and agrochemicals. The second facility is expected to enrich Silicon-28, which the Company believes will enable faster, more efficient semiconductors for use in artificial intelligence and quantum computing. The third facility is expected to enrich Ytterbium-176, a critically important raw material used in the production of radio-oncology therapies.

About ASP Isotopes Inc.

ASP Isotopes Inc. is a development 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 for enabling quantum computing; Molybdenum-100, Molybdenum-98, Zinc-68, Ytterbium-176, and Nickel-64 for new, emerging healthcare applications, as well as Chlorine-37, Lithium-6, Lithium-7 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 the future of the Company's enrichment technologies as applied to uranium enrichment, the outcome of the project contemplated by the MOU with Necsa, the impact of ongoing economic uncertainty and geopolitical tensions and risks on global supply chains, the market demand for enriched uranium, the commencement of supply of enriched 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 the outcomes of various strategies and projects undertaken by the Company; the potential impact of laws or government regulations or policies in South Africa, the United Kingdom or elsewhere; 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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1. IEA. “Net Zero by 2050 – Analysis.” IEA,www.iea.org/reports/net-zero-by-2050
2. https://www.uxc.com/p/tools/FuelCalculator.aspx2021

Source: ASP Isotopes Inc.