

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): **February 12, 2025**

LIGHTBRIDGE CORPORATION

(Exact name of registrant as specified in its charter)

Nevada
(State or other jurisdiction
of incorporation)

001-34487
(Commission
File Number)

91-1975651
(IRS Employer
Identification No.)

11710 Plaza America Drive, Suite 2000
Reston, VA 20190
(Address of principal executive offices, including zip code)

(571) 730-1200
(Registrant's Telephone Number, Including Area Code)

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, \$0.001 par value	LTBR	The Nasdaq Capital Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (17 CFR §230.405) or Rule 12b-2 of the Securities Exchange Act of 1934 (17 CFR §240.12b-2).

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 7.01 Regulation FD Disclosure.

On February 12, 2025, Lightbridge Corporation issued a press release announcing the successful co-extrusion of coupon samples of Lightbridge Fuel™ material consisting of an alloy of depleted uranium and zirconium with an outer cladding made of nuclear-grade zirconium alloy materials in collaboration with Idaho National Laboratory. A copy of the press release is furnished with this Form 8-K as Exhibit 99.1.

The information in this Item 7.01, including the press release, shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, except as shall be expressly set forth by reference to such filing.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
99.1	Press release dated February 12, 2025.
104	Cover Page Interactive Data 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.

LIGHTBRIDGE CORPORATION

Dated: February 12, 2025

By: /s/ Seth Grae
Name: Seth Grae
Title: President and Chief Executive Officer



Lightbridge Successfully Co-Extrudes a Demonstration Coupon Sample with Uranium-Zirconium Alloy and Cladding



Figure 1: Lightbridge and INL teams at Idaho National Laboratory

RESTON, Va, February 12, 2025 (GLOBE NEWSWIRE) – Lightbridge Corporation (Lightbridge) (Nasdaq: LTBR), an advanced nuclear fuel technology company, today announced a significant milestone in its innovative nuclear fuel development efforts, successfully performing a co-extrusion demonstration of a coupon sample consisting of an alloy of depleted uranium and zirconium with an outer cladding made of nuclear-grade zirconium alloy material at Idaho National Laboratory (INL). The co-extrusion process demonstration conducted at INL entailed pressing the metallic alloy billet encased in zirconium alloy cladding through a die to produce a cylindrical rod with a length of approximately 8 feet.



Figure 2: Heated-up billet assembly being loaded into the extrusion press prior to co-extrusion



Figure 3: Co-extruded rod sample after co-extrusion process

A video demonstration of the co-extrusion process can be found on Lightbridge's YouTube Channel at <https://www.youtube.com/@lightbridgecorporation>

The video can be found at: https://youtu.be/PnK_FXz1Jqk

The co-extrusion of this demonstration coupon sample represents a key fabrication milestone under Lightbridge's Strategic Partnership Project Agreement with Battelle Energy Alliance LLC (BEA), the U.S. Department of Energy's (DOE) operating contractor for INL.

The uranium-zirconium alloy used in the demonstration rodlet is the same composition that Lightbridge plans to use for its future commercial Lightbridge Fuel™ product. INL and Lightbridge will now work together to analyze the co-extruded coupon sample to confirm the extrusion process parameters.

These efforts pave the way for future production of coupon samples using enriched uranium, which will undergo capsule irradiation testing in INL's Advanced Test Reactor (ATR) under an existing Cooperative Research and Development Agreement between Lightbridge and BEA. This planned irradiation testing program, coupled with post irradiation examination activities whose scope is to be released via a future Project Task Statement, aims to generate critical irradiation performance data for Lightbridge's advanced fuel and support regulatory licensing efforts for its commercial deployment.

"This milestone exemplifies the collaboration and innovation driving the advancement of Lightbridge Fuel," said **Ron Crone, INL Associate Laboratory Director**. "The co-extrusion of this coupon sample leverages the capabilities of INL's Materials and Fuels Complex and underscores our commitment to advancing nuclear energy innovation. We are proud to support Lightbridge in this important work."

Dr. Scott Holcombe, Vice President of Engineering at Lightbridge Corporation, added, "This successful co-extrusion demonstration is a testament to the continuous progress we have made over the past year on demonstration of our fuel fabrication process in our collaborative efforts with INL. By integrating the uranium-zirconium alloy with nuclear-grade cladding material, we're advancing the safety, efficiency, and performance of nuclear fuel, bringing us closer to commercialization and real-world deployment."

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About Idaho National Laboratory

Battelle Energy Alliance manages INL for the U.S. Department of Energy's Office of Nuclear Energy. INL is the nation's center for nuclear energy research and development, and also performs research in each of DOE's strategic goal areas: energy, national security, science and the environment. For more information, visit www.inl.gov. Follow us on social media: Facebook, Instagram, LinkedIn and X.

About Lightbridge Corporation

Lightbridge Corporation (NASDAQ: LTBR) is focused on developing advanced nuclear fuel technology essential for delivering abundant, zero-emission, clean energy and providing energy security to the world. The Company is developing Lightbridge Fuel™, a proprietary next-generation nuclear fuel technology for existing light water reactors and pressurized heavy water reactors, significantly enhancing reactor safety, economics, and proliferation resistance. The Company is also developing Lightbridge Fuel for new small modular reactors (SMRs) to bring the same benefits plus load-following with renewables on a zero-carbon electric grid.

Lightbridge has entered into two long-term framework agreements with Battelle Energy Alliance LLC, the United States Department of Energy's operating contractor for Idaho National Laboratory, the United States' lead nuclear energy research and development laboratory. DOE's Gateway for Accelerated Innovation in Nuclear program has twice awarded Lightbridge to support the development of Lightbridge Fuel over the past several years. Lightbridge is participating in two university-led studies through the DOE Nuclear Energy University Program at Massachusetts Institute of Technology and Texas A&M University. An extensive worldwide patent portfolio backs Lightbridge's innovative fuel technology. Lightbridge is included in the Russell Microcap® Index. For more information, please visit www.ltbridge.com.

To receive Lightbridge Corporation updates via e-mail, subscribe at <https://www.ltbridge.com/investors/news-events/email-alerts>

Lightbridge is on YouTube. Subscribe to access past demonstrations, interviews, and other video content at <https://www.youtube.com/@lightbridgecorporation>

Lightbridge is on X (formerly Twitter). Sign up to follow @LightbridgeCorp at <http://twitter.com/lightbridgecorp>.

Forward Looking Statements

With the exception of historical matters, the matters discussed herein are forward-looking statements. These statements are based on current expectations on the date of this news release and involve a number of risks and uncertainties that may cause actual results to differ significantly from such estimates. The risks include, but are not limited to: Lightbridge's ability to commercialize its nuclear fuel technology; the degree of market adoption of Lightbridge's product and service offerings; Lightbridge's ability to fund general corporate overhead and outside research and development costs; market competition; our ability to attract and retain qualified employees; dependence on strategic partners; demand for fuel for nuclear reactors; Lightbridge's ability to manage its business effectively in a rapidly evolving market; the availability of nuclear test reactors and the risks associated with unexpected changes in Lightbridge's fuel development timeline; the increased costs associated with metallization of Lightbridge's nuclear fuel; public perception of nuclear energy generally; changes in the political environment; risks associated with war in Europe; changes in the laws, rules and regulations governing Lightbridge's business; development and utilization of, and challenges to, Lightbridge's intellectual property; risks associated with potential shareholder activism; potential and contingent liabilities; as well as other factors described in Lightbridge's filings with the Securities and Exchange Commission (the "SEC"). Lightbridge does not assume any obligation to update or revise any such forward-looking statements, whether as the result of new developments or otherwise, except as required by law. Readers are cautioned not to put undue reliance on forward-looking statements.

A further description of risks and uncertainties can be found in Lightbridge's Annual Report on Form 10-K for the fiscal year ended December 31, 2023, and in its other filings with the SEC, including in the sections thereof captioned "Risk Factors" and "Forward-Looking Statements", all of which are available at <http://www.sec.gov> and www.ltbridge.com.

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