

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

**FORM 10-Q**

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended: **March 31, 2024**

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File Number: **001-34487**

**LIGHTBRIDGE CORPORATION**

(Exact name of registrant as specified in its charter)

**Nevada**

(State or other jurisdiction of incorporation or organization)

**91-1975651**

(I.R.S. Employer Identification No.)

**11710 Plaza America Drive, Suite 2000 Reston, VA 20190**

(Address of principal executive offices, Zip Code)

**(571) 730-1200**

(Registrant's telephone number, including area code)

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

Title of Each Class:

**Common Stock, \$0.001 par value**

Trading Symbol(s):

**LTBR**

Name of Each Exchange on Which Registered:

**The Nasdaq Capital Market**

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer

Accelerated Filer

Non-accelerated Filer

Smaller reporting company

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.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

The number of shares outstanding of the issuer's common stock, as of May 10, 2024 is as follows:

Class of Securities

**Common Stock, \$0.001 par value**

Shares Outstanding

**14,434,480**

**LIGHTBRIDGE CORPORATION**  
**FORM 10-Q**  
**MARCH 31, 2024**

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**PART I-FINANCIAL INFORMATION****ITEM 1. CONDENSED CONSOLIDATED FINANCIAL STATEMENTS****LIGHTBRIDGE CORPORATION  
UNAUDITED CONDENSED CONSOLIDATED BALANCE SHEETS**

	<u>March 31, 2024</u>	<u>December 31, 2023</u>
<b>ASSETS</b>		
Current Assets		
Cash and cash equivalents	\$ 27,942,421	\$ 28,598,445
Prepaid expenses and other current assets	401,859	207,063
Total Current Assets	28,344,280	28,805,508
Other Assets		
Prepaid project costs and other long-term assets	479,625	483,000
Trademarks	108,865	108,865
Total Assets	<u>\$ 28,932,770</u>	<u>\$ 29,397,373</u>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current Liabilities		
Accounts payable and accrued liabilities	\$ 907,421	\$ 486,326
Total Current Liabilities	907,421	486,326
Commitments and contingencies - Note 5		
Stockholders' Equity		
Preferred stock, \$0.001 par value, 10,000,000 authorized shares, 0 shares issued and outstanding at March 31, 2024 and December 31, 2023	—	—
Common stock, \$0.001 par value, 25,000,000 authorized, 14,189,780 shares and 13,698,274 shares issued and outstanding at March 31, 2024 and December 31, 2023, respectively	14,190	13,698
Additional paid-in capital	183,228,519	181,295,125
Accumulated deficit	(155,217,360)	(152,397,776)
Total Stockholders' Equity	28,025,349	28,911,047
Total Liabilities and Stockholders' Equity	<u>\$ 28,932,770</u>	<u>\$ 29,397,373</u>

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

**LIGHTBRIDGE CORPORATION**  
**UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS**

	Three Months Ended	
	March 31,	
	2024	2023
Revenue	\$ —	\$ —
Operating Expenses		
General and administrative	2,157,745	1,865,929
Research and development	1,023,823	448,044
Total Operating Expenses	<u>3,181,568</u>	<u>2,313,973</u>
Other Operating Income		
Contributed services - research and development	—	31,028
Total Other Operating Income	—	31,028
Operating Loss	<u>(3,181,568)</u>	<u>(2,282,945)</u>
Other Income		
Interest income	361,984	256,365
Total Other Income	<u>361,984</u>	<u>256,365</u>
Net Loss Before Income Taxes	(2,819,584)	(2,026,580)
Income taxes	—	—
Net Loss	<u>\$ (2,819,584)</u>	<u>\$ (2,026,580)</u>
Net Loss Per Common Share		
Basic and diluted	\$ (0.21)	\$ (0.17)
Weighted Average Number of Common Shares Outstanding	13,491,954	11,673,736

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

**LIGHTBRIDGE CORPORATION**  
**UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY**  
**FOR THE THREE MONTHS ENDED MARCH 31, 2023 AND 2024**

	<u>Common Stock</u>		<u>Additional Paid-in Capital</u>	<u>Accumulated Deficit</u>	<u>Total Stockholders' Equity</u>
	<u>Shares</u>	<u>Amount</u>			
Balance - January 1, 2023	11,900,217	\$ 11,900	\$ 173,595,385	\$ (144,489,130)	\$ 29,118,155
Shares issued - registered offerings - net of offering costs	169,978	170	730,882	—	731,052
Shares issued to consultant & directors for services	55,835	56	214,944	—	215,000
Stock-based compensation	—	—	284,360	—	284,360
Net loss for the three months ended March 31, 2023	—	—	—	(2,026,580)	(2,026,580)
Balance - March 31, 2023	<u>12,126,030</u>	<u>\$ 12,126</u>	<u>\$ 174,825,571</u>	<u>\$ (146,515,710)</u>	<u>\$ 28,321,987</u>

	<u>Common Stock</u>		<u>Additional Paid-in Capital</u>	<u>Accumulated Deficit</u>	<u>Total Stockholders' Equity</u>
	<u>Shares</u>	<u>Amount</u>			
Balance - January 1, 2024	13,698,274	\$ 13,698	\$ 181,295,125	\$ (152,397,776)	\$ 28,911,047
Shares issued - registered offerings - net of offering costs	427,300	428	1,221,554	—	1,221,982
Shares issued to consultant & directors for services	64,206	64	254,936	—	255,000
Stock-based compensation	—	—	456,904	—	456,904
Net loss for the three months ended March 31, 2024	—	—	—	(2,819,584)	(2,819,584)
Balance - March 31, 2024	<u>14,189,780</u>	<u>\$ 14,190</u>	<u>\$ 183,228,519</u>	<u>\$ (155,217,360)</u>	<u>\$ 28,025,349</u>

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

**LIGHTBRIDGE CORPORATION**  
**UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS**

	<b>Three Months Ended</b>	
	<b>March 31,</b>	
	<b>2024</b>	<b>2023</b>
Operating Activities		
Net Loss	\$ (2,819,584)	\$ (2,026,580)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation	456,904	284,360
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(194,796)	(278,173)
Prepaid project costs and other long-term assets	3,375	—
Accounts payable and accrued liabilities	676,095	440,647
Net Cash Used in Operating Activities	<u>(1,878,006)</u>	<u>(1,579,746)</u>
Net Cash Used in Investing Activities	<u>—</u>	<u>—</u>
Financing Activities		
Net proceeds from the issuances of common stock	1,221,982	731,052
Net Cash Provided by Financing Activities	<u>1,221,982</u>	<u>731,052</u>
Net Decrease in Cash and Cash Equivalents	(656,024)	(848,694)
Cash and Cash Equivalents, Beginning of Period	28,598,445	28,899,997
Cash and Cash Equivalents, End of Period	<u>\$ 27,942,421</u>	<u>\$ 28,051,303</u>
Supplemental Disclosure of Cash Flow Information		
Cash paid during the period:		
Interest paid	\$ —	\$ —
Income taxes paid	\$ —	\$ —
Non-Cash Financing Activities:		
Payment of accrued liabilities with common stock	\$ 255,000	\$ 215,000

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

**LIGHTBRIDGE CORPORATION**  
**NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS**

**Note 1. Nature of Operations, Basis of Presentation, Summary of Significant Accounting Policies and Recent Accounting Pronouncements**

***Nature of Operations and Basis of Presentation***

When used in these notes, the terms “Lightbridge”, “Company,” “we,” “us” or “our” mean Lightbridge Corporation and all entities included in the condensed consolidated financial statements.

The Company was formed on October 6, 2006, when Thorium Power, Ltd., which was incorporated in the state of Nevada on February 2, 1999, merged with Thorium Power, Inc. (TPI), which was incorporated in the state of Delaware on January 8, 1992. On September 29, 2009, the Company changed its name from Thorium Power, Ltd. to Lightbridge Corporation and began its focus on developing and commercializing metallic nuclear fuels. The Company is a nuclear fuel technology company developing its next generation nuclear fuel technology. These condensed consolidated financial statements include the accounts of the Company and the Company’s wholly-owned subsidiaries, TPI, and Lightbridge International Holding LLC, a Delaware limited liability company. These wholly-owned subsidiaries are inactive, and all significant intercompany transactions and balances have been eliminated in consolidation.

The accompanying unaudited condensed consolidated financial statements of Lightbridge Corporation and its subsidiaries have been prepared in accordance with the rules and regulations of the Securities and Exchange Commission, or the SEC, including the instructions to Form 10-Q and Regulation S-X. Certain information and footnote disclosures normally included in financial statements prepared in accordance with generally accepted accounting principles in the United States of America, including a summary of the Company’s significant accounting policies, have been condensed or omitted from these statements pursuant to such rules and regulations and, accordingly, they do not include all the information and footnotes necessary for comprehensive condensed consolidated financial statements and should be read in conjunction with the audited consolidated financial statements for the year ended December 31, 2023, included in the Annual Report on Form 10-K for the year ended December 31, 2023 filed with the SEC on March 4, 2024.

In the opinion of the management of the Company, all adjustments, which are of a normal recurring nature, necessary for a fair statement of the results for the three-month period have been made. Results for the interim period presented are not necessarily indicative of the results that might be expected for the entire fiscal year.

***Summary of Significant Accounting Policies***

**Fair Value of Financial Instruments**

The Company determines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between unaffiliated market participants at the measurement date.

Accounting Standards Codification (ASC), *Fair Value Measurement* (ASC 820), establishes a fair value hierarchy that prioritizes the inputs used to measure fair value. Assets and liabilities measured at fair value are categorized based on whether the inputs are observable in the market and the degree that the inputs are observable. The hierarchy gives the highest priority to active markets for identical assets and liabilities (Level 1 measurement) and the lowest priority to unobservable inputs (Level 3 measurement). The categorization of financial instruments within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement. The three levels of the fair value hierarchy are as follows:

Level 1 - Observable inputs such as quoted prices in active markets for identical assets or liabilities;

Level 2 - Inputs other than quoted prices that are observable for the asset or liability, either directly or indirectly. These include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active and inputs other than quoted prices that are observable for the asset or liability; and

Level 3 - Unobservable inputs that reflect management’s assumptions.

For disclosure purposes, assets and liabilities are classified in their entirety in the fair value hierarchy level based on the lowest level of input that is significant to the overall fair value measurement. The Company’s assessment of the significance of a particular input to the fair value measurement requires judgment and may affect the placement within the fair value hierarchy levels.

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The Company's financial instruments consist principally of cash and cash equivalents, accounts payable and accrued liabilities. The carrying amounts of accounts payable and accrued liabilities are considered to be a Level 1 measurement, representative of their respective fair values because of the short-term nature of those instruments.

The following table summarizes the valuation of the Company's cash equivalents (in millions) that fall within the fair value hierarchy at March 31, 2024. There were no cash equivalents at December 31, 2023.

Assets	Level I	Level II	Level III
Treasury Bills	\$ 2.5	\$ 17.5	\$ -

### **Certain Risks and Uncertainties**

The Company will need additional funding and /or in-kind support via a combination of strategic alliances, government grants, further offerings of equity securities, or an offering of debt securities in order to support its future research and development (R&D) activities required to further enhance and complete the development and commercialization of its fuel products.

There can be no assurance that the Company will be able to successfully continue to conduct its operations if there is a lack of financial resources available in the future to continue its fuel development activities, and a failure to do so would have a material adverse effect on the Company's future R&D activities, financial position, results of operations, and cash flows. Also, the success of the Company's operations will be subject to other numerous contingencies, some of which are beyond management's control. These contingencies include general and regional economic conditions, contingent liabilities, potential competition with other nuclear fuel developers, including those entities developing accident tolerant fuels, changes in government regulations, risks related to the R&D of our nuclear fuel, regulatory approval of the Company's fuel, support for nuclear power, changes in accounting and taxation standards, inability to achieve overall short-term and long-term R&D milestones toward commercialization, future impairment charges to the Company's assets, and global or regional catastrophic events. The Company may also be subject to various additional political, economic, and other uncertainties.

### **Recent Accounting Pronouncements**

In November 2023, the Financial Accounting Standards Board (FASB) issued ASU No. 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures (ASU 2023-07), which expands on the required disclosure of incremental segment information. The new guidance is effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024, with early adoption permitted. The Company does not expect this guidance to have a material impact on its consolidated financial statements and related disclosures.

In December 2023, the FASB issued ASU No. 2023-09, Income Taxes (Topic 740): Improvements to Income Tax Disclosures (ASU 2023-09), which requires companies to annually disclose categories in the effective tax rate reconciliation and additional information about income taxes paid. The new guidance is effective for annual periods beginning after December 15, 2024, with early adoption permitted. The Company expects the new standard to have an immaterial effect on its consolidated financial statements and related disclosures upon adoption.

In August 2020, the FASB issued ASU 2020-06, *Debt-Debt with Conversion and Other Options* (Subtopic 470-20) and *Derivatives and Hedging- Contracts in Entity's Own Equity* (Subtopic 815-40), which simplifies the complexity associated with applying U.S. GAAP for certain financial instruments with characteristics of liabilities and equity. This ASU (1) simplifies the accounting for convertible debt instruments and convertible preferred stock by removing the existing guidance in ASC 470-20, *Debt: Debt with Conversion and Other Options*, that requires entities to account for beneficial conversion features and cash conversion features in equity, separately from the host convertible debt or preferred stock; (2) revises the scope exception from derivative accounting in Subtopic 815-40 for freestanding financial instruments and embedded features that are both indexed to the issuer's own stock and classified in stockholders' equity, by removing certain criteria required for equity classification; and (3) revises the guidance in ASC 260, *Earnings Per Share*, to require entities to calculate diluted earnings per share for convertible instruments by using the if-converted method. ASU 2020-06 is effective for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years. Early adoption is permitted, but no earlier than fiscal years beginning after December 15, 2020, including interim periods within those fiscal years. Adoption is either through a modified retrospective method or a full retrospective method of transition. The Company adopted this guidance on January 1, 2024 and the adoption did not have a material impact on its results of operations, financial position, and disclosures because the Company does not have any transactions or instruments to which this standard applies. If in the future, the Company issues new convertible debt, warrants or other instruments, the standard may have a material effect, but it cannot be determined at this time.

The Company has evaluated other recently issued, but not yet effective, accounting standards that have been issued or proposed by the FASB or other standards-setting bodies through the filing date of these unaudited condensed consolidated financial statements and do not believe the future adoption of any such standards will have a material impact on the Company's consolidated financial statements and related disclosures.



**Note 2. Net Loss Per Share**

Basic net loss per share is computed using the weighted-average number of common shares outstanding during the reporting period, except that it does not include unvested common shares subject to repurchase or cancellation. Diluted net loss per share is computed using the weighted-average number of common shares and, if dilutive, potential common shares outstanding during the period. Potential common shares consist of the incremental common shares issuable upon the exercise of stock options.

The outstanding securities noted below have been excluded from the computation of diluted weighted shares outstanding for the three months ended March 31, 2024 and 2023, as they would have been anti-dilutive due to the Company's losses at March 31, 2024 and 2023 and also because the exercise price of certain of these outstanding securities was greater than the average closing price of the Company's common stock.

	Three Months Ended March 31,	
	2024	2023
Stock options outstanding	555,582	525,903
Restricted stock awards outstanding	557,688	416,316
Total	<u>1,113,270</u>	<u>942,219</u>

**Note 3. Prepaid Project Costs and Other Long-term Assets**

In 2022, the Company entered into two agreements with Idaho National Laboratory (INL), in collaboration with the United States Department of Energy (DOE), to support the development of Lightbridge Fuel™. At the time of signing, the Company made advanced payments for future project work totaling \$0.4 million to Battelle Energy Alliance, LLC (BEA), DOE's operating contractor for INL. In May 2023, the Company and INL modified the agreements to extend the contract term to May 2029, aligning it with the duration of the irradiation testing and increasing the advanced payments by \$0.1 million to \$0.5 million. The prepaid project costs were \$0.5 million as of March 31, 2024 and December 31, 2023, recorded under Other Assets - Prepaid project costs and other long-term assets.

**Note 4. Accounts Payable and Accrued Liabilities**

Accounts payable and accrued liabilities consisted of the following (rounded in millions):

	March 31, 2024	December 31, 2023
Trade payables	\$ 0.2	\$ 0.1
Accrued legal and consulting expenses	0.5	0.4
Accrued bonus	0.2	—
Total	<u>\$ 0.9</u>	<u>\$ 0.5</u>

**Note 5. Commitments and Contingencies**

**Commitments**

As of March 31, 2024 and December 31, 2023, the Company had total contractual commitments for R&D work for the following three R&D projects (rounded in millions):

	March 31, 2024	December 31, 2023
INL Project	\$ 3.1	\$ 2.9
<i>Romania Feasibility Study</i>	0.1	0.2
<i>Centrus Energy FEED Study</i>	0.3	0.5
Total	<u>\$ 3.5</u>	<u>\$ 3.6</u>

*Project Task Statements - INL Project*

On March 26, 2024, the Company and BEA entered into Modification No. 2 ("Modification No. 2") to the project task statement (PTS) under the Strategic Partnership Project Agreement (SPPA), dated December 9, 2022, as amended on May 23, 2023, by and between the Company and BEA. Pursuant to the terms of Modification No. 2, the potential amounts payable by the Company to reimburse BEA for its expenses and employee time were increased by approximately \$0.6 million, bringing the total estimated cost for the work to be performed under the "umbrella" SPPA to \$1.7 million.

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After accounting for Modification No. 2, total cash payments from the Company to BEA under both Agreements were estimated at approximately \$4.3 million (excluding project contingencies) on a cost reimbursable basis over the performance periods under the initial releases.

As of March 31, 2024, the Company had approximately \$3.1 million in outstanding PTS commitments to BEA relating to the R&D work being conducted under the SPPA and “umbrella” Cooperative Research and Development Agreement (CRADA) at INL. Performance of work under these agreements may be terminated at any time by either party, without any liability, after the effective date of termination, upon giving a thirty-day written notice under the SPPA and a sixty-day written notice under the CRADA, to the other party. In the event of termination, the Company shall be responsible for BEA’s costs (including the closeout costs), through the effective date of termination, but in no event shall the Company’s cost responsibility exceed the total estimated cost stated in each PTS and any subsequent modification to the PTS.

### Romania Feasibility Study of Lightbridge Fuel™ for use in CANDU reactors

On October 16, 2023, the Company engaged Institutul de Cercetări Nucleare Pitești, a subsidiary of Regia Autonomia Tehnologii pentru Energia Nucleara (RATEN ICN) in Romania to perform an engineering study to assess the compatibility and suitability of Lightbridge Fuel™ for use in CANDU reactors.

As of March 31, 2024, the Company had approximately \$0.1 million in remaining outstanding project commitments to RATEN ICN.

### FEED Study with Centrus Energy for a Lightbridge Pilot Fuel Fabrication Facility

On December 5, 2023, the Company entered into an agreement with Centrus Energy Corp. (Centrus Energy) to conduct a front-end engineering and design (FEED) study to construct a Lightbridge Pilot Fuel Fabrication Facility (LPFFF) to manufacture Lightbridge Fuel™ using high-assay low-enriched uranium (HALEU) at the American Centrifuge Plant in Piketon. The work is expected to be completed in 2024.

These Agreements can be terminated by either Party by giving thirty calendar days' prior written notice of termination to the other Party.

### Operating Leases

The Company leased office space for a 12-month term from January 1, 2024 through December 31, 2024 with a monthly payment of approximately \$,000. The future minimum lease payments required under the non-cancellable operating leases for 2024 total approximately \$0.1 million. Total rent expense for the three months ended March 31, 2024 and 2023 was approximately \$24,000.

## **Note 6. Research and Development Costs**

### INL Project

In 2022, Lightbridge entered into agreements with BEA, to support the development of Lightbridge Fuel™. These framework agreements use an innovative structure that consists of an “umbrella” SPPA and an “umbrella” CRADA, with an initial duration of seven years. Throughout the duration of these umbrella agreements, all research and development (R&D) work contracted with BEA is through the issuance of PTSs. The initial phase of work under the two agreements will culminate in irradiation testing in the Advanced Test Reactor (ATR) of fuel samples using enriched uranium supplied by the DOE. The initial phase of work aims to generate irradiation performance data for Lightbridge’s delta-phase uranium-zirconium alloy relating to various thermophysical properties. The data, which will be obtained during post-irradiation examination work, will support fuel performance modeling and regulatory licensing efforts for the commercial deployment of Lightbridge Fuel™. For the three months ended March 31, 2024 and 2023, the Company recorded \$0.4 million and \$0.2 million in R&D expenses associated with INL, respectively.

### Romania Feasibility Study

On October 16, 2023, the Company engaged RATEN ICN in Romania to perform an engineering study to assess the compatibility and suitability of Lightbridge Fuel™ for use in CANDU reactors. The total price of approximately \$0.2 million is payable in three installments, including an advance payment of \$0.1 million and an interim milestone payment and final payment totaling approximately \$0.1 million. For the three months ended March 31, 2024, the Company recorded \$0.1 million in R&D expenses associated with RATEN ICN.

Centrus Energy FEED Study

On December 5, 2023, the Company entered into an agreement with Centrus Energy to conduct a FEED study to add a dedicated LPFFF at the American Centrifuge Plant in Piketon, Ohio. As of the date hereof, Centrus Energy has completed the initial phase of the FEED study and issued a preliminary report. For the three months ended March 31, 2024, the Company recorded \$0.2 million in R&D expenses associated with this FEED study. After reviewing the preliminary report, the Company will decide whether to proceed to the final phase of the FEED study. If the Company decides to move forward with the final phase of the FEED study, the remaining work is expected to be completed in 2024 at an additional fixed price cost of approximately \$0.3 million.

The following table presents the total R&D expenses for the three months ended March 31, 2024 and 2023 (rounded to millions):

	March 31,	
	2024	2023
INL Project	\$ 0.4	\$ 0.2
Romania Feasibility Study	0.1	—
Centrus Energy FEED Study	0.2	—
Allocated employee compensation and stock-based compensation expenses	0.2	0.1
Other outside R&D expenses	0.1	0.1
Total	<u>\$ 1.0</u>	<u>\$ 0.4</u>

**Note 7. Stockholders' Equity and Stock-Based Compensation**

At March 31, 2024, the Company had 14,189,780 common shares outstanding (including outstanding RSAs totaling 557,688 shares). Also outstanding were stock options relating to 555,582 shares of common stock (of which 542,972 stock options were vested), all totaling 14,745,362 shares of common stock and all common stock equivalents, potentially outstanding at March 31, 2024.

At December 31, 2023, the Company had 13,698,274 common shares outstanding (including outstanding RSAs totaling 557,688 shares). Also outstanding were stock options relating to 510,787 shares of common stock (of which 498,177 stock options were vested), all totaling 14,209,061 shares of common stock and all common stock equivalents, outstanding at December 31, 2023.

**Common Stock Equity Offerings**

*At-the-Market (ATM) Offerings*

On May 28, 2019, the Company entered into an at-the-market equity offering sales agreement with Stifel, Nicolaus & Company, Incorporated (Stifel), which was amended on April 9, 2021 and May 8, 2024 (the "ATM Agreement"), pursuant to which the Company may issue and sell shares of its common stock from time to time through Stifel as the Company's sales agent. Under this amended agreement, the Company pays Stifel a commission equal to 3.0% of the aggregate gross proceeds of any sales of common stock under the agreement. The offering of common stock pursuant to this agreement can be terminated with 10 days written notice by either party. Sales of the Company's common stock through Stifel, if any, will be made by any method that is deemed to be an "at-the-market" equity offering as defined in Rule 415 promulgated under the Securities Act of 1933. On March 25, 2021, the Company filed a shelf registration statement on Form S-3, registering the sale of up to \$75.0 million of the Company's securities, which registration statement was declared effective on April 5, 2021 and was set to expire on April 5, 2024. On April 4, 2023, the Company filed a prospectus supplement pursuant to which the Company could offer and sell shares of its common stock having an aggregate offering price of up to \$17.9 million, of which \$7.0 million remained available for future share issuances as of March 31, 2024.

On March 29, 2024, the Company filed a new shelf registration statement on Form S-3, registering the sale of up to \$75.0 million of the Company's securities, which registration statement was declared effective on April 19, 2024. On May 10, 2024, the Company filed a prospectus supplement pursuant to which the Company may offer and sell shares of its common stock having an aggregate offering price of up to \$6.6 million from time to time through its ATM.

The Company records its ATM sales on a settlement date basis. The Company sold 427,300 shares under the ATM for the three months ended March 31, 2024 resulting in net proceeds of \$1.2 million (stock issuance costs were approximately \$0.1 million). The Company sold approximately 169,978 shares under the ATM for the three months ended March 31, 2023 resulting in net proceeds of \$0.7 million (stock issuance costs were approximately \$30,000).

**Stock-based Compensation**

*2020 Equity Incentive Plan*

On March 9, 2020, the Board of Directors adopted the Company's 2020 Omnibus Incentive Plan (the 2020 Plan). On September 3, 2020, the shareholders approved the 2020 Plan to authorize grants of the following types of awards: (a) Options, (b) Stock Appreciation Rights, (c) Restricted Stock and Restricted Stock Units, and (d) Other Stock-Based and Cash-Based Awards. The total number of shares of common stock available for issuance under the 2020 Plan is 1,800,000 shares with 758,672 shares available for future issuance at March 31, 2024.

**Stock Options**

During the three months ended March 31, 2024 and 2023, the number of stock options the Company granted to a consultant was 58,309 and 0, respectively.

**Common Stock**Consultants' Stock Issuances

For the three months ended March 31, 2024 and 2023, the Company issued 3,750 shares (with stock prices at \$4.00 per share) to its investor relations firm for services provided during the quarter, recorded to general and administrative expenses. The total stock-based compensation expense recorded for these share issuances was \$15,000 for each quarter with a weighted average grant date fair value of \$4.00 per share.

Directors' Stock Issuances

On November 20, 2023, the Board of Directors approved an equity grant valued at \$240,000 in total to its six directors, which resulted in granting a total of 60,456 shares of common stock, valued on the grant date at \$3.97 per share, which vested on January 2, 2024.

On December 15, 2022, the Board of Directors approved an equity grant valued at \$200,000 in total to its five independent directors, recorded in general and administrative expenses, which resulted in granting a total of 52,085 shares of common stock to the five independent directors, valued on the grant date at \$3.84 per share, which vested on January 3, 2023.

**Restricted Stock Awards**

As of March 31, 2024 and December 31, 2023, there were 557,688 restricted stock awards (RSAs) included in the total issued and outstanding common stock. A total of \$0.4 million and \$0.3 million of compensation expense was recorded for the three months ended March 31, 2024 and 2023, respectively. Compensation expense is recognized in a straight line over the three-year vesting period.

As of March 31, 2024, total unrecognized compensation cost related to restricted stock units was \$2.2 million, which is expected to be recognized over a remaining weighted-average vesting period of 1.9 years.

**Stock-Based Compensation Expense****Stock Options**

The following assumptions were used in the Black-Scholes pricing model to determine the fair value of stock options granted during the three months ended March 31, 2024 and 2023:

	<b>Three Months Ended March 31,</b>	
	<b>2024</b>	<b>2023</b>
Expected volatility	75.36%	—
Risk free interest rate	4.54%	—
Dividend yield rate	—	—
Expected term	2 years	—
Closing price per share – common stock	\$ 2.62	—

Total non-cash stock-based compensation expense recorded related to options granted and restricted stock awards included in the Company's unaudited condensed consolidated statements of operations for the three months ended March 31, 2024 and 2023 are as follows (rounded in millions):

	<b>Three Months Ended March 31,</b>	
	<b>2024</b>	<b>2023</b>
Research and development expenses	\$ 0.1	\$ —
General and administrative expenses	0.4	0.3
Total stock-based compensation expense	<u>\$ 0.5</u>	<u>\$ 0.3</u>

**Note 8. Subsequent Events**

***Amendment to At-the-Market Equity Offering Sales Agreement***

On May 8, 2024, the Company entered into an amendment (the "Amendment") to its at-the-market equity offering sales agreement, dated May 28, 2019 and as amended on April 9, 2021, with Stifel, Nicolaus & Company, Incorporated ("Stifel") to (i) replace certain references to the Company's expired shelf registration statement on Form S-3 (File No. 333-254702) filed on March 25, 2021 with the Securities and Exchange Commission ("SEC") and declared effective April 5, 2021, with reference to the Company's effective shelf registration statement on Form S-3 (File No. 333-278388), filed on March 29, 2024 with the SEC and declared effective on April 19, 2024 (the "Registration Statement"), (ii) update public float calculations included therein and (iii) reduce the commission rate for fees owed to Stifel from 4.0% of the gross sales price per share sold to 3.0% of the gross sales price per share sold.

***ATM Sales***

Sales of common stock under the ATM from April 1, 2024 to May 10, 2024 amounted to approximately 0.2 million shares, which resulted in total net proceeds of approximately \$0.7 million.

***Amendment to 2020 Equity Incentive Plan***

On February 27, 2024, the Board of Directors approved an increase of 700,000 shares to the authorized number of shares under the 2020 Equity Incentive Plan, increasing the total authorized number of shares from 1,800,000 shares to 2,500,000 shares. This increase was approved by the stockholders at the shareholders' annual meeting on April 19, 2024.

## FORWARD-LOOKING STATEMENTS

In addition to historical information, this Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. All statements other than statements of historical fact are statements that could be deemed forward-looking statements. We use words such as “believe,” “expect,” “anticipate,” “project,” “target,” “plan,” “optimistic,” “intend,” “aim,” “will,” “may,” or similar expressions, which are intended to identify forward-looking statements. Such statements include, among others:

- those concerning market and business segment growth, demand, and acceptance of our nuclear fuel technology and other steps toward the commercialization of Lightbridge Fuel™;
- any projections of sales, earnings, revenue, margins, or other financial items;
- any statements of the plans, strategies, and objectives of management for future operations and the timing and outcome of the development of our nuclear fuel technology;
- any statements regarding future economic conditions or performance;
- any statements about future financings and liquidity;
- the Company’s anticipated financial resources and position; and
- all assumptions, expectations, predictions, intentions, or beliefs about future events and other statements that are not historical facts.

You are cautioned that any such forward-looking statements are not guarantees of future performance and involve risks and uncertainties, as well as assumptions that if they were to ever materialize or prove incorrect, could cause the results of the Company to differ materially from those expressed or implied by such forward-looking statements. Such risks and uncertainties, among others, include:

- our ability to commercialize our nuclear fuel technology, including risks related to the design and testing of nuclear fuel incorporating our technology and the degree of market adoption of the Company’s product and service offerings;
- dependence on strategic partners;
- any adverse changes to our agreements or relationship with the U.S. government and its national laboratories;
- our ability to fund our future operations, including general corporate overhead and outside research and development (R&D) expenses, and continue as a going concern;
- the future market and demand for our fuel for nuclear reactors and our ability to attract customers;
- our ability to manage the business effectively in a rapidly evolving market;
- our ability to employ and retain qualified employees and consultants that have experience in the nuclear industry;
- competition and competitive factors in the markets in which we compete, including from accident tolerant fuels;
- the availability of nuclear test reactors and the risks associated with unexpected changes in our nuclear fuel development timeline;
- the increased costs associated with metallization of our nuclear fuel;
- uncertainties related to conducting business in foreign countries;
- public perception of nuclear energy generally;
- changes in laws, rules, and regulations governing our business;
- changes in the political environment;
- development and utilization of, and challenges to, our intellectual property domestically and abroad;
- the trading price of our securities is likely to be volatile, and purchasers of our securities could incur substantial losses; and
- the other risks and uncertainties identified in Item 1A. Risk Factors included in our Annual Report on Form 10-K for the year ended December 31, 2023.

Most of these factors are beyond our ability to predict or control and you should not put undue reliance on any forward-looking statement. Future events and actual results could differ materially from those set forth in, contemplated by or underlying the forward-looking statements. Forward-looking statements speak only as of the date on which they are made. The Company assumes no obligation and does not intend to update these forward-looking statements for any reason after the date of the filing of this report, to conform these statements to actual results or to changes in our expectations, except as required by law.

## ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following Management's Discussion and Analysis of Financial Condition and Results of Operations, or MD&A, is intended to help the reader understand Lightbridge Corporation, our operations, and our present business environment. MD&A is provided as a supplement to, and should be read in conjunction with, our condensed consolidated financial statements and the accompanying notes thereto contained in Part I, Item 1 of this report, as well as those included in our Annual Report on Form 10-K for the year ended December 31, 2023.

This MD&A consists of the following sections:

- Overview of Our Business and Development of Lightbridge Fuel™ - a general overview of our business and updates;
- Critical Accounting Estimates - a discussion of critical judgments and estimates;
- Operations Review - an analysis of our consolidated results of operations for the periods presented in our condensed consolidated financial statements; and
- Liquidity, Capital Resources, and Financial Position - an analysis of our cash flows and an overview of our financial position.

As discussed in more detail under "Forward-Looking Statements" preceding this MD&A, the following discussion contains forward-looking statements that are based on our management's current expectations, estimates, and projections, which are subject to a number of risks and uncertainties. Our actual results may differ materially from those discussed in these forward-looking statements because of the risks and uncertainties inherent in future events, *including those set forth under "Forward-Looking Statements" and Part II, Item 1A. Risk Factors included herein.*

### **OVERVIEW OF OUR BUSINESS AND DEVELOPMENT OF LIGHTBRIDGE FUEL™**

When used in this Quarterly Report on Form 10-Q, the terms "Lightbridge", the "Company", "we", "our", and "us" refer to Lightbridge Corporation together with its wholly-owned subsidiaries Lightbridge International Holding LLC and Thorium Power Inc. Lightbridge's principal executive offices are located at 11710 Plaza America Drive, Suite 2000, Reston, Virginia 20190 USA.

#### **Our Business**

At Lightbridge, we are developing next generation nuclear fuel for water-cooled reactors that could significantly improve the economics and safety of existing and new nuclear power plants, large and small, and enhance proliferation resistance of spent nuclear fuel while supplying clean energy to the electric grid. We project that the world's energy and climate needs can only be met if nuclear power's share of the energy-generating mix grows substantially in the coming decades. We believe Lightbridge can benefit from a growing nuclear power industry, and that our nuclear fuel can help enable that growth to happen.

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We believe our metallic fuel will offer significant economic and safety benefits over traditional nuclear fuel, primarily because of the superior heat transfer properties and the resulting lower operating temperature of all-metal fuel. We also believe that uprating a reactor with Lightbridge Fuel™ will add incremental electricity at a lower levelized cost than any other means of generating baseload electric power, including any renewable, fossil, or hydroelectric energy source, or any traditional nuclear fuel.

Emerging nuclear technologies include small modular reactors (SMRs), which are now in the development and licensing phases. We expect that Lightbridge Fuel™ can provide water-cooled SMRs with the same benefits our technology brings to large reactors, with such benefits being even more meaningful to the economic case for deployment of SMRs, including potential load following capability when included on a virtually zero-carbon electric grid with renewable energy sources. We expect Lightbridge Fuel™ to generate more power in SMRs than traditional nuclear fuels.

We have built a significant portfolio of patents, and we anticipate testing our nuclear fuel through third-party vendors and others, including the United States Department of Energy's (DOE) national laboratories. Currently, we are performing the majority of our R&D activities within and in collaboration with the DOE's national laboratories.

### **Recent Developments**

#### FEED Study with Centrus Energy for a Lightbridge Pilot Fuel Fabrication Facility

On December 5, 2023, we entered into an agreement with Centrus Energy Corp. (Centrus Energy) to conduct a front-end engineering and design (FEED) study for a Lightbridge Pilot Fuel Fabrication Facility (LPFFF) to manufacture Lightbridge Fuel™ using high-assay low-enriched uranium (HALEU) at the American Centrifuge Plant in Piketon, Ohio. The FEED study's objective is to identify infrastructure and licensing requirements as well as the estimated cost and construction schedule for the LPFFF. Centrus Energy's wholly-owned subsidiary, American Centrifuge Operating, LLC, is leading the study. As of the date hereof, Centrus Energy has completed the initial phase of the FEED study and issued a preliminary report. The Company has expensed approximately \$0.2 million in connection with the work that has been completed by Centrus Energy. After reviewing the preliminary report, we will decide whether to proceed to the final phase of the FEED study. If we decide to move forward with the final phase of the FEED study, the remaining work is expected to be completed in 2024 at an additional fixed price cost of approximately \$0.3 million.

#### Romania Feasibility Study of Lightbridge Fuel™ for use in CANDU reactors

On October 16, 2023, we engaged Institutul de Cercetări Nucleare Pitești, a subsidiary of Regia Autonomă Tehnologii pentru Energia Nucleară in Romania to perform an engineering study to assess the compatibility and suitability of Lightbridge Fuel™ for use in CANDU reactors. This assessment covers key areas including mechanical design, neutronics analysis, and thermal and thermal-hydraulic evaluations. The findings from this engineering study will play an important role in guiding future economic evaluations and navigating potential regulatory licensing-related issues for potential use of Lightbridge Fuel™ in CANDU reactors. The remaining work is expected to be completed in 2024 at an additional fixed price of approximately \$0.1 million.

#### Idaho National Laboratory Agreements

In December 2022, Lightbridge entered into agreements with Battelle Energy Alliance, LLC (BEA), the DOE's operating contractor for Idaho National Laboratory (INL), to support the development of Lightbridge Fuel™. The framework agreements use an innovative structure that consists of an "umbrella" Strategic Partnership Project Agreement (SPPA) and an "umbrella" Cooperative Research and Development Agreement (CRADA), each with BEA, with an initial duration of seven years.

We anticipate that the initial phase of work under the two agreements that has been released will culminate in casting and extrusion of unclad fuel material samples using enriched uranium supplied by the DOE that will subsequently be inserted for irradiation testing in the Advanced Test Reactor (ATR) at INL. The initial phase of work aims to generate irradiation performance data for Lightbridge's delta-phase uranium-zirconium alloy relating to various thermophysical properties. The data will support fuel performance modeling and regulatory licensing efforts for commercial deployment of Lightbridge Fuel™.

We anticipate that subsequent phases of work under the two umbrella agreements that have not yet been released may include post-irradiation examination of the irradiated fuel material coupons, loop irradiation testing in the ATR, and post-irradiation examination of one or more uranium-zirconium fuel rodlets, as well as transient experiments in the Transient Reactor Test Facility at INL.

In 2023, we worked with INL to complete and issue a Quality Implementation Plan (QIP) for our collaborative project at INL which was an essential first step to ensure all future work performed at INL on the project would meet the U.S. nuclear industry quality assurance requirements. Additionally, we worked with INL to demonstrate casting of delta-phase uranium-zirconium ingots with depleted uranium using existing INL equipment. As part of that effort, we cast several laboratory-scale ingots using depleted uranium and zirconium alloy materials.



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On March 18, 2024, we announced a successful extrusion demonstration at INL of a billet into an unclad cylindrical rod, made of depleted uranium and zirconium alloy using the same composition of uranium and zirconium elements in the alloy as what is planned to be ultimately used in Lightbridge Fuel™. We will work with INL to analyze the extruded rod to confirm the extrusion process parameters prior to producing future fuel samples using enriched uranium for irradiation testing in the ATR.

On March 26, 2024, the Company and BEA entered into Modification No. 2 (“Modification No. 2”) to the project task statement (PTS) under the SPPA, dated December 9, 2022, as amended on May 23, 2023, by and between the Company and BEA. Pursuant to the terms of Modification No. 2, the potential amounts payable by the Company to reimburse BEA for its expenses and employee time were increased by approximately \$0.6 million, bringing the total estimated cost for the work to be performed under the “umbrella” SPPA to \$1.7 million.

After Modification No. 2, total cash payments from the Company to BEA under both agreements were estimated at approximately \$4.3 million (excluding project contingencies) on a cost reimbursable basis over the performance periods under the initial releases. As of March 31, 2024, the Company had approximately \$3.1 million in outstanding PTS commitments to BEA.

### Nuclear Energy University Program Awards

Texas A&M University (TAMU), NuScale Power, and Structural Integrity Associates are working on a 3-year study of our nuclear fuel, led by TAMU. In mid-2023, TAMU was awarded \$1 million by the DOE’s Nuclear Energy University Program (NEUP) R&D Awards to conduct this study. The project entails a characterization of the performance of the Lightbridge Fuel™ Helical Cruciform advanced fuel design, which will generate sets of experimental data on friction factor, flow, and heat transfer behavior under NuScale’s SMR simulated normal and off-normal conditions.

We previously announced the ongoing NEUP project with the Massachusetts Institute of Technology (MIT). The study led by MIT and funded by DOE relates to evaluation of accident tolerant fuels in various SMRs. The project aims to simulate the fuel and safety performance of Lightbridge Fuel™ for the NuScale SMR and provide scoping analysis to improve the safety and economics of water-cooled SMRs.

We do not have any contractual obligations with the collaboration teams working on the above-mentioned projects and will not receive any revenue or record any economic benefits from these awards.

### ***Future Steps Toward Our Fuel Development and Timeline For The Commercialization of Our Nuclear Fuel Assemblies***

We anticipate fuel development milestones for Lightbridge Fuel™ over the next 2-3 years will consist of the following:

- continue to execute SPPA/CRADA work at INL leading to casting and extrusion of unclad fuel material samples using enriched uranium and their subsequent insertion for irradiation testing in the ATR.
- complete a feasibility study for the use of our nuclear fuel in CANDU heavy water reactors.
- complete a FEED study for a LPFFF in collaboration with Centrus Energy.
- commence manufacturing efforts relating to co-extrusion of clad rodlets for loop irradiation testing.

The long-term milestones towards development and commercialization of nuclear fuel assemblies include, among other things, irradiating nuclear material samples and prototype fuel rods with enriched uranium in test reactors, conducting post-irradiation examination of irradiated material samples and/or prototype fuel rods, performing thermal-hydraulic experiments, performing seismic and other out-of-reactor experiments, performing advanced computer modeling and simulations to support fuel qualification, designing a lead test assembly (LTA), entering into a lead test rod/assembly agreement(s) with a host reactor(s), demonstrating the production of lead test rods and/or lead test assemblies at a pilot-scale fuel fabrication facility and demonstrating the operation of lead test rods and/or lead test assemblies in commercial reactors.

There are inherent uncertainties in the cost and outcomes of the many steps needed for successful deployment of our fuel in commercial nuclear reactors, which makes it difficult to accurately predict the timing of the commercialization of our nuclear fuel technology. However, based on our best estimate and assuming adequate R&D funding levels, we expect to begin demonstration of lead test rods (LTRs) and/or possibly LTAs with our metallic fuel in commercial reactors in the 2030s and begin receiving purchase orders for initial fuel reload batches from utilities 15-20 years from now, with deployment of our nuclear fuel in the first reload batch in a commercial reactor taking place approximately two years thereafter. We are exploring ways of shortening this timeframe that may include securing access to expanded irradiation test loop capacity in existing or new research reactor facilities.

**Future Potential Collaborations and Other Opportunities**

In the ordinary course of business, we engage in periodic reviews of opportunities to invest in or acquire companies or units within companies to leverage operational synergies and/or establish new streams of revenue. We will be opportunistic in this regard. We may also partner or contract with entities that could be synergistic to our fuel business or present an attractive stable business and/or growth opportunity in the nuclear space.

**CRITICAL ACCOUNTING ESTIMATES**

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make a variety of estimates and assumptions that affect (i) the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and (ii) the reported amounts of revenues and expenses during the reporting periods covered by the financial statements. For a discussion of the accounting judgments and estimates that we have identified as critical in the preparation of our financial statements, please see “Critical Accounting Estimates” under Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our Annual Report on Form 10-K for the year ended December 31, 2023, filed with the SEC on March 4, 2024. There have been no significant changes in our critical accounting policies and estimates during the three months ended March 31, 2024.

Our management expects to make judgments and estimates about the effect of matters that are inherently uncertain. As the number of variables and assumptions affecting the future resolution of the uncertainties increase, these judgments become even more subjective and complex. Although we believe that our estimates and assumptions are reasonable, actual results may differ significantly from these estimates. Changes in estimates and assumptions based upon actual results may have a material impact on our results of operations and/or financial condition.

**OPERATIONS REVIEW**

Financial information is included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

**Condensed Consolidated Results of Operations - Three Months Ended March 31, 2024 and 2023**

The following table presents our historical operating results and the change in amounts for the periods indicated (rounded to millions):

	Three Months Ended March 31,		Increase (Decrease) Change \$	Increase (Decrease) Change %
	2024	2023		
Operating Expenses				
General and administrative	\$ 2.2	\$ 1.9	\$ 0.3	16%
Research and development	\$ 1.0	\$ 0.4	\$ 0.6	150%
Total Operating Expenses	\$ 3.2	\$ 2.3	\$ 0.9	39%
Operating Loss	\$ (3.2)	\$ (2.3)	\$ 0.9	39%
Other Income	\$ 0.4	\$ 0.3	\$ 0.1	33%
Net loss before Income Taxes	\$ (2.8)	\$ (2.0)	\$ 0.8	40%
Net Loss	\$ (2.8)	\$ (2.0)	\$ 0.8	40%

**Operating Expenses****General and Administrative**

General and administrative expenses consist mostly of compensation and related costs for personnel and facilities, stock-based compensation, finance, human resources, information technology, and fees for consulting and other professional services. Professional services are principally comprised of legal, audit, strategic advisory services, and outsourcing services.

Total general and administrative expenses increased by \$0.3 million for the three months ended March 31, 2024, as compared to the three months ended March 31, 2023. The increase of \$0.3 million was primarily due to an increase in employee compensation and employee benefits and directors’ fee of \$0.1 million, due to increases in compensation, an increase in postage and recruitment expenses of \$0.1 million due to our SEC proxy mailings to shareholders and recruitment fees for new R&D employees and an increase in stock-based compensation of \$0.1 million, due to the stock-based compensation amortization of RSAs issued in November 2023.

Total stock-based compensation included in general and administrative expenses was \$0.4 million and \$0.3 million for three months ended March 31, 2024 and March 31, 2023, respectively.

## Research and Development

R&D expenses consist primarily of costs associated with our CRADA and SPPA with INL for the R&D of our fuel, employee compensation and related fringe benefits including stock-based compensation and related allocable overhead costs for the R&D of our fuel.

The following table presents our total R&D expenses, including internal costs and other outside R&D costs, for the three months ended March 31, 2024 and 2023 (rounded to millions):

	March 31,	
	2024	2023
INL Project	\$ 0.4	\$ 0.2
<i>Romania Feasibility Study</i>	0.1	—
<i>Centrus Energy FEED Study</i>	0.2	—
Allocated employee compensation and stock-based compensation expenses	0.2	0.1
Other outside R&D expenses	0.1	0.1
Total	<u>\$ 1.0</u>	<u>\$ 0.4</u>

Total R&D expenses increased by \$0.6 million for the three months ended March 31, 2024, as compared to the three months ended March 31, 2023 due to the increase in R&D activities related to the development of our fuel. This increase primarily consisted of an increase in INL project labor costs and outside R&D expenses of \$0.5 million, and an increase in allocated employee compensation and employee benefits of \$0.1 million.

We currently project investing approximately \$8 million to \$9 million in the R&D of our nuclear fuel over the next 12 to 15 months.

Due to the nature of our R&D expenditures, future costs and schedule estimates are inherently uncertain and can vary significantly as new information and the outcome of these R&D activities become available. Our future business operations are dependent on budgetary constraints due primarily to market conditions and the uncertainty of future liquidity and capital resources available to us to conduct our future R&D activities.

### Other Income

There was an increase in other income of \$0.1 million due to rising interest rates over the past year, which resulted in an increase in interest income earned from the purchase of treasury bills and from our bank savings account for the three months ended March 31, 2024, as compared to the three months ended March 31, 2023.

## LIQUIDITY, CAPITAL RESOURCES, AND FINANCIAL POSITION

### Liquidity Outlook

We measure liquidity in terms of our ability to fund the cash requirements of our R&D activities and our general and administrative expenses, including our contractual obligations and other commitments. We believe that based on our current level of operating expenses and currently available cash resources, we will have sufficient funds available to cover our business activities and operating cash needs for the next 12 months. Our long-term cash requirements for R&D are currently estimated to be an average of \$10.0 million of outside or third-party R&D expenditures per year over the next 10-15 years. In order to meet these long-term cash requirements for future planned operations to develop and commercialize our nuclear fuel, including any additional expenditures that may result from unexpected developments, it will be necessary for our project to receive direct or indirect funding and/or in-kind support from government and/or strategic partners and/or other third-party sources.

At March 31, 2024, we had cash and cash equivalents of \$27.9 million, as compared to \$28.6 million at December 31, 2023, a decrease of \$0.7 million. We raised net proceeds of \$1.2 million from the sale of approximately 0.4 million shares of common stock during the three months ended March 31, 2024. Our net cash used in operating activities for the three months ended March 31, 2024 was \$1.9 million and our cash flow projections indicate that we will have continued negative cash flows for the foreseeable future. We currently do not anticipate any incoming cash flows, other than the sale of common stock through our ATM offering. We are not profitable, and we cannot provide any assurance that we will become profitable in the future. We will continue to incur losses because we are in the early development stage of commercializing our nuclear fuel.

We have approximately \$27.6 million of working capital as of the date of this filing. We currently project a negative cash flow from our operations for both our general and administrative and R&D expenses, resulting in total expected expenditures of approximately \$16.2 million for the next 12 months. Our R&D expenses are expected to increase over the next 12-15 months. Our cash balance at March 31, 2024 and as of the date of this filing exceeds our anticipated cash requirements for the next 12 months. There are inherent uncertainties in forecasting the R&D and other expenditures that will be required in the future. Once other anticipated agreements are finalized or other future R&D agreements are entered into and the future R&D expenses are known, we expect to incur a significantly higher level of future required R&D expenses and higher negative monthly cash flows from operations.

If sufficient funding becomes available to us, our R&D activities may significantly increase in the future. This funding is needed to continue our nuclear fuel development project and to achieve our future R&D milestones. The actual amount of cash we will need to operate is subject to many factors, including, but not limited to, the timing, design and conduct of the R&D work at the DOE's national laboratories for our fuel along with the cost to commercialize our nuclear fuel. Accordingly, there is high potential for budget variances in the current cost projections and fuel development timelines of our current planned operations over the fuel development period. We will continue to utilize our ATM to finance our future R&D and corporate activities.

We will need to receive substantial funding and in-kind support from government, strategic partners and/or other third-party sources throughout our nuclear fuel R&D development period in order to fund our ongoing R&D efforts in the future. If we are unable to obtain such funding and/or in-kind support that meets our future R&D cash requirements, we will need to seek other funding, which may include the issuance of additional shares of the Company's common stock, if available. This will result in dilution to our existing stockholders. If we can raise additional funds through the issuance of preferred stock, other equity or convertible securities, these securities could have rights or preferences senior to those of our common stock and could contain covenants that restrict our operations in the future. There can be no assurance that we will be able to obtain additional equity or debt financing on terms acceptable to us, if at all.

Our current source of cash available to us for the next 12 months, in addition to cash and cash equivalents on hand, is the potential funding from equity issuances pursuant to the at-the-market equity offering sales agreement, as amended, with Stifel, Nicolaus & Company, Incorporated. The Company previously had an effective shelf registration statement on Form S-3 that was filed with the Securities and Exchange Commission, or SEC, on March 25, 2021, registering the sale of up to \$75 million of the Company's securities which was declared effective on April 5, 2021. We filed a prospectus supplement, dated April 4, 2023, with the SEC pursuant to which we may offer and sell shares of common stock having an aggregate offering price of up to \$17.9 million from time to time, through the ATM. We filed a new shelf registration statement on Form S-3 on March 29, 2024 and that became effective on April 19, 2024. We filed a prospectus supplement, dated May 10, 2024, with the SEC pursuant to which we may offer and sell shares of common stock having an aggregate offering price of up to \$6.6 million from time to time, through the ATM.

Under current SEC regulations set forth under General Instruction I.B.6. of Form S-3, if at any time our public float is less than \$75.0 million, and for so long as our public float remains less than \$75.0 million, the amount we can raise through primary public offerings of securities in any twelve-month period using shelf registration statements is limited to an aggregate of one-third of our public float, which is referred to as the baby shelf rules. As of the date of this filing, we are subject to the baby shelf rules for any offerings conducted on our current shelf registration statement, and therefore may be limited on the amount of funding available under this Form S-3 shelf registration statement in the future. Although we expect this ATM facility to continue to be a source of working capital for the Company in 2024, there is no assurance that an ATM financing arrangement will be available to us in the future. See Note 7. Stockholders' Equity and Stock-Based Compensation of the Notes to our condensed consolidated financial statements included in Part I. Item 1. *Financial Statements*, of this Quarterly Report on Form 10-Q for information regarding our prior equity financings.

We have no debt or lines of credit and we have financed our operations to date through the sale of our preferred stock and common stock. Management believes that public or private equity investments may be available in the future; however, adverse market conditions, in our common stock price and trading volume, as well as other factors could substantially impair our ability to raise capital in the future and continue developing our nuclear fuel.

#### **Short-Term and Long-Term Liquidity Sources**

Our current source of liquidity is cash raised from our ATM facility.

As discussed above, we will seek new financing in order to bring us additional sources of capital, depending on the capital market conditions of our common stock. There can be no assurance that these additional sources of capital will be made available on terms acceptable to us, or at all. The primary potential sources of cash that may be available to us are as follows:

- equity or debt investment from third-party investors in Lightbridge;
- collaboration with potential industry partners; and
- strategic investment and/or government funding to support the remaining R&D activities required to continue the development of our fuel products and move them to a commercial stage.

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In support of our long-term business with respect to our fuel technology business, we endeavor to create strategic alliances with other parties to support the remaining R&D activities that are required to further enhance and complete the development of our fuel products to a commercial stage. We may be unable to form such strategic alliances on terms acceptable to us or at all.

See Note 7. Stockholders' Equity and Stock-Based Compensation of the Notes to our condensed consolidated financial statements included in Part I. Item 1. *Financial Statements*, of this Quarterly Report on Form 10-Q for information regarding our prior equity financings.

The following table provides detailed information about our net cash flows for the three months ended March 31, 2024 and 2023 (rounded in millions):

**Cash Flows**

	Three Months Ended	
	March 31,	
	2024	2023
Net Cash Used in Operating Activities	\$ (1.9)	\$ (1.5)
Net Cash Used in Investing Activities	—	—
Net Cash Provided by Financing Activities	1.2	0.7
Net Cash Outflow	<u>\$ (0.7)</u>	<u>\$ (0.8)</u>

Operating Activities

Our net cash used in operating activities increased by \$0.4 million for the three months ended March 31, 2024 as compared to the three months ended March 31, 2023. This increase was primarily due to increased spending on R&D and general and administrative expenses.

Financing Activities

Our net cash provided by financing activities increased by \$0.5 million for the three months ended March 31, 2024 as compared to the three months ended March 31, 2023. This increase was due to an increase in the net proceeds received from the issuance of common stock under our at-the-market (ATM) facility.

Cash provided by our ATM facility was \$1.2 million (sale of approximately 0.4 million common shares) and \$0.7 million (sale of approximately 0.2 million common shares) for the three months ended March 31, 2024 and 2023, respectively.

**Off Balance Sheet Arrangements**

We do not have any off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity or capital expenditures or capital resources that is material to an investor in our securities.

**Inflation**

Our business, revenues, and operating results have not been affected in any material way by inflation.

**ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

The Company is not required to provide the information required by this Item as it is a “smaller reporting company,” as defined in Rule 12b-2 of the Exchange Act.

**ITEM 4. CONTROLS AND PROCEDURES**

**Evaluation of Disclosure Controls and Procedures**

The Company maintains disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”)) that are designed to provide reasonable assurance that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is (a) recorded, processed, summarized and reported, within the time periods specified in the SEC’s rules and forms, and (b) accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating such controls and procedures, the Company recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives.

Our management, under the supervision and with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this report. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were not effective as of March 31, 2024 due to the material weakness in internal control over financial reporting described below.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. As previously disclosed in Item 9A of our Annual Report on Form 10-K for the year ended December 31, 2023, in management's assessment of the effectiveness of internal control over financial reporting as of December 31, 2023, management determined that there was a material weakness related to the design of our information technology general controls (ITGC) over logical access to key information systems used in the financial reporting process, resulting in certain segregation of duties conflicts. Additionally, certain business process controls that are dependent on information from these systems were also not effective. Notwithstanding the material weakness, there were no restatements of prior period finance statements, and no changes in previously released financial results were required as a result of the material weakness.

#### **Ongoing Remediation of Previously Identified Material Weakness**

The Company's management, under the oversight of the Audit Committee, has undertaken measures to remediate these deficiencies. This includes enhancing the design of logical access controls to ensure appropriate segregation of duties through improved internal documentation and monitoring activities. Management began to implement these remedial steps during the fourth quarter of fiscal 2023 by removing privileged access to accounting software. The material weakness will not be considered remediated until the applicable remedial controls operate for a sufficient period of time and management has concluded, through testing, that these controls are designed and operating effectively. The Company may also identify additional measures that may be required to remediate the material weaknesses in the Company's internal control over financial reporting, necessitating further action.

#### **Changes in Internal Control Over Financial Reporting**

Except as noted above, there were no changes in the Company's internal control over financial reporting during the first quarter of 2024 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

## PART II-OTHER INFORMATION

### ITEM 1. LEGAL PROCEEDINGS

From time to time, we may become involved in various lawsuits and legal proceedings, which arise in the ordinary course of business. However, litigation is subject to inherent uncertainties, and an adverse result in these or other matters may arise from time to time that may harm our business. We are currently not aware of any such legal proceedings or claims that we believe, either individually or in the aggregate, will have a material adverse effect on our business, financial condition, or results of operations.

### ITEM 1A. RISK FACTORS

Other than as set forth below, there have been no other material changes to our risk factors from the risk factors disclosed in our Annual Report on Form 10-K for the year ended December 31, 2023.

*Acquisition activity presents certain risks to our business, operations and financial condition, and we may not realize the financial and strategic goals contemplated at the time of a transaction.*

We expect that acquisitions will be an important part of our long-term growth strategy. Successful execution following the closing of an acquisition is essential to achieving the anticipated benefits of the transaction. We may make acquisitions to support our growth and our acquisition strategy depends on our ability to complete and integrate the acquisitions. Mergers and acquisitions are inherently risky, and any mergers and acquisitions that we complete may not be successful. The process of integrating an acquired company's business into our operations is challenging and may result in expected or unexpected operating or compliance challenges, which may require significant expenditures and a significant amount of our management's attention that would otherwise be focused on the ongoing operation of our business. The potential difficulties or risks of integrating an acquired company's business include, among others:

- the effect of any potential acquisition on our financial and strategic positions and our reputation,
- risk that we fail to successfully implement our business plan for the combined business,
- risk that we are unable to obtain the anticipated benefits of any potential acquisition, including synergies or economies of scale,
- challenges in reconciling business practices or in integrating activities, logistics or information technology and other systems,
- challenges in reconciling accounting issues, especially if an acquired company utilizes accounting principles different from those we use,
- retention risk with respect to key collaborators and employees and challenges in retaining, assimilating and training new employees,
- potential failure of the due diligence processes to identify significant problems, liabilities or other shortcomings or challenges of an acquired company, which could result in unexpected litigation, regulatory exposure, financial contingencies and known and unknown liabilities, and
- challenges in complying with newly applicable laws and regulations, including obtaining or retaining required approvals, licenses and permits.

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Any potential acquisitions may also result in the expenditure of available cash and amortization of expenses any of which could have a material adverse effect on our results of operations or financial condition. Investments in immature businesses with unproven track records have an especially high degree of risk, with the possibility that we may lose the value of our entire investments or incur additional unexpected liabilities. Large or costly acquisitions or investments may also diminish our capital resources and liquidity or limit our ability to engage in additional transactions for a period of time. All of the foregoing risks may be magnified as the cost, size or complexity of a potential acquisition or acquired company increases, or where the acquired company's market or business are materially different from ours, or where more than one integration is occurring simultaneously or within a concentrated period of time.

In addition, in the future we may require significant financing to complete an acquisition or investment, whether through bank loans, raising of debt, issuance of equity securities or otherwise. We cannot assure you that such financing options will be available to us on reasonable terms, or at all. If we are not able to obtain such necessary financing, it could have an impact on our ability to consummate any potential acquisition or investment and execute our growth strategy. The issuance of a significant number of shares as consideration for any potential acquisition would have a dilutive effect on our existing stockholders.

**ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES OR USE OF PROCEEDS**

None

**ITEM 3. DEFAULTS UPON SENIOR SECURITIES**

Not Applicable

**ITEM 4. MINE SAFETY DISCLOSURES**

Not Applicable

**ITEM 5. OTHER INFORMATION**

During the three months ended March 31, 2024, no director or officer of the Company adopted or terminated a "Rule 10b5-1 trading arrangement" or "non-Rule 10b5-1 trading arrangement," as each term is defined in Item 408(a) of Regulation S-K.

**Amendment to At-the-Market Equity Offering Sales Agreement**

On May 8, 2024, the Company entered into an amendment (the "Amendment") to its at-the-market equity offering sales agreement, dated May 28, 2019 and as amended on April 9, 2021, with Stifel, Nicolaus & Company, Incorporated ("Stifel") to (i) replace certain references to the Company's expired shelf registration statement on Form S-3 (File No. 333-254702) filed on March 25, 2021 with the Securities and Exchange Commission ("SEC") and declared effective April 5, 2021, with reference to the Company's effective shelf registration statement on Form S-3 (File No. 333-278388), filed on March 29, 2024 with the SEC and declared effective on April 19, 2024 (the "Registration Statement"), (ii) update public float calculations included therein and (iii) reduce the commission rate for fees owed to Stifel from 4.0% of the gross sales price per share sold to 3.0% of the gross sales price per share sold.

Sales of the Company's common stock through Stifel, if any, will be made by any method that is deemed to be an "at-the-market" equity offering as defined in Rule 415 promulgated under the Securities Act of 1933, as amended, pursuant to the Company's Registration Statement, the base prospectus filed as part of such registration statement, and the prospectus supplement dated May 10, 2024.

The foregoing summary of the Amendment does not purport to be complete and is qualified in its entirety by reference to the full text of the Amendment, a copy of which is attached as Exhibit 1.1 to this Quarterly Report on Form 10-Q and incorporated herein by reference.

This Quarterly Report on Form 10-Q shall not constitute an offer to sell or the solicitation of an offer to buy the securities discussed herein, nor shall there be any offer, solicitation, or sale of the securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction.



ITEM 6. EXHIBITS

EXHIBIT INDEX -

<b>Exhibit Number</b>	<b>Description</b>
<a href="#">1.1*</a>	<a href="#">Amendment No. 2 to the At-the-Market Equity Offering Sales Agreement, dated May 8, 2024, by and between Lightbridge Corporation and Stifel, Nicolaus &amp; Company, Incorporated.</a>
<a href="#">5.1*</a>	<a href="#">Opinion of Gary R. Henrie, Esq.</a>
<a href="#">10.1▲*</a>	<a href="#">Modification No. 2 to the Project Task Statement, dated March 25, 2024, under the Strategic Partnership Project Agreement, dated December 9, 2022, as amended on May 23, 2023, by and between Lightbridge Corporation and Battelle Energy Alliance, LLC.</a>
23.1*	Consent of Gary R. Henrie, Esq. (included in Exhibit 5.1).
<a href="#">31.1*</a>	<a href="#">Rule 13a-14(a)/15d-14(a) Certification - Principal Executive Officer.</a>
<a href="#">31.2*</a>	<a href="#">Rule 13a-14(a)/15d-14(a) Certification - Principal Financial Accounting Officer.</a>
<a href="#">32*</a>	<a href="#">Section 1350 Certifications.</a>
101	Interactive data files pursuant to Rule 405 of Regulation S-T.
101.INS	Inline XBRL Instance Document (the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document).
101.SCH	Inline XBRL Taxonomy Extension Schema Document.
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	Inline XBRL Taxonomy Extension Labels Linkbase Document.
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101).

\* Filed or furnished herewith

▲ Certain portions of this Exhibit have been redacted pursuant to Item 601(b)(10)(iv) of Regulation S-K. The Company agrees to furnish supplementally an unredacted copy of this Exhibit to the SEC upon request.

**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.

Date: May 10, 2024

**LIGHTBRIDGE CORPORATION**

By: /s/ Seth Grae  
Name: Seth Grae  
Title: President, Chief Executive Officer and Director  
(Principal Executive Officer)

By: /s/ Larry Goldman  
Name: Larry Goldman  
Title: Chief Financial Officer  
(Principal Financial Officer and Principal Accounting Officer)

AMENDMENT NO. 2 TO AT-THE-MARKET EQUITY OFFERING SALES AGREEMENT

May 8, 2024

STIFEL, NICOLAUS & COMPANY, INCORPORATED  
One South Street, 15th Floor  
Baltimore, Maryland 21202

Ladies and Gentlemen:

Lightbridge Corporation (the “Company”) and Stifel, Nicolaus & Company, Incorporated (the “Agent”) are parties to that certain At-the-Market Equity Offering Sales Agreement dated May 28, 2019, as amended by Amendment No. 1 to At-the-Market Equity Offering Sales Agreement dated April 9, 2021 (as amended, the “Original Agreement”). All capitalized terms not defined herein shall have the meanings ascribed to them in the Original Agreement. The parties, intending to be legally bound, hereby amend the Original Agreement as follows:

1. Reference to the “Registration Statement” in the Original Agreement shall refer to the registration statement on Form S-3 (File No. 333-278388), originally filed with the Securities and Exchange Commission on March 29, 2024 and declared effective by the Securities and Exchange Commission on April 19, 2024.

2. Section 6(k) of the Original Agreement is hereby deleted and replaced with:

“S-3 Eligibility. At the time the Registration Statement was or will be declared effective, and at the time the Company’s most recent Annual Report on Form 10-K was filed with the Commission, the Company met or will meet the then applicable requirements for the use of Form S-3 under the Securities Act, including, but not limited to, General Instruction I.B.6 of Form S-3, if applicable. As of the close of trading on the Exchange on March 28, 2024, the aggregate market value of the outstanding voting and non-voting common equity (as defined in Rule 405) of the Company held by persons other than affiliates of the Company (pursuant to Rule 144 of the Securities Act, those that directly, or indirectly through one or more intermediaries, control, or are controlled by, or are under common control with, the Company) (the “Non-Affiliate Shares”), was approximately \$43.1 million (calculated by multiplying (x) the price at which the common equity of the Company was last sold on the Exchange on March 18, 2024 times (y) the number of Non-Affiliate Shares). The Company is not a shell company (as defined in Rule 405 under the Securities Act) and has not been a shell company for at least 12 calendar months previously and if it has been a shell company at any time previously, has filed current Form 10 information (as defined in General Instruction I.B.6 of Form S-3) with the Commission at least 12 calendar months previously reflecting its status as an entity that is not a shell company.”

3. All references to “May 28, 2019” set forth in Schedule 1 and Exhibit 7(m) of the Original Agreement are revised to read “May 8, 2024 (as amended by Amendment No. 1 to At-the-Market Equity Offering Sales Agreement, dated April 9, 2021 and Amendment No. 2 to At-the-Market Equity Offering Sales Agreement, dated May 8, 2024)”.

4. The reference to “up to 4%” set forth in Schedule 2 of the Original Agreement is hereby revised to read “equal to 3%”.

5. In addition to the requirements under Section 9 of the Original Agreement, the Company agrees to pay the reasonable fees and disbursements of counsel to the Agent in an amount not to exceed \$50,000 in connection with this Amendment No. 2 to At-the-Market Offering Sales Agreement.

6. Except as specifically set forth herein, all other provisions of the Original Agreement shall remain in full force and effect.

7. Entire Agreement; Amendment; Severability. This Amendment No. 2 to the Original Agreement together with the Original Agreement (including all schedules and exhibits attached hereto and thereto and Placement Notices issued pursuant hereto and thereto) constitutes the entire agreement and supersedes all other prior and contemporaneous agreements and undertakings, both written and oral, among the parties hereto with regard to the subject matter hereof. All references in the Original Agreement to the “Agreement” shall mean the Original Agreement as amended by this Amendment No. 2; *provided, however*, that all references to “date of this Agreement” in the Original Agreement shall continue to refer to the date of the Original Agreement.

8. Applicable Law; Consent to Jurisdiction. This amendment shall be governed by, and construed in accordance with, the internal laws of the State of New York without regard to the principles of conflicts of laws. Each party hereby irrevocably submits to the non-exclusive jurisdiction of the state and federal courts sitting in the City of New York, borough of Manhattan, for the adjudication of any dispute hereunder or in connection with any transaction contemplated hereby, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof (certified or registered mail, return receipt requested) to such party at the address in effect for notices to it under this amendment and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law.

9. Waiver of Jury Trial. The Company and the Agent each hereby irrevocably waives any right it may have to a trial by jury in respect of any claim based upon or arising out of this amendment or any transaction contemplated hereby.

10. Counterparts. This amendment may be executed in counterparts, each of which shall be deemed an original, but both of which together shall constitute one and the same instrument. Delivery of an executed amendment by one party to the other may be made by facsimile transmission.

**[Remainder of Page Intentionally Blank]**

If the foregoing correctly sets forth the understanding among the Company and the Agent, please so indicate in the space provided below for that purpose, whereupon this letter shall constitute a binding amendment to the Original Agreement between the Company and the Agent.

Very truly yours,

**LIGHTBRIDGE CORPORATION**

By: /s/ Larry Goldman

Name: Larry Goldman

Title: Chief Financial Officer

**STIFEL, NICOLAUS & COMPANY,  
INCORPORATED**

By: /s/ Lewis Chia

Name: Lewis Chia

Title: Managing Director

**Gary R. Henrie**  
Attorney at Law  
Licensed in the States of Utah and Nevada

619 South 1040 East  
American Fork, UT 84003

Telephone: 307-200-9415  
e-mail: grhlaw@hotmail.com

May 10, 2024

Lightbridge Corporation  
11710 Plaza America Drive, Suite 2000  
Reston, VA 20190

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

We are acting as special Nevada counsel for Lightbridge Corporation, a Nevada corporation (the “**Company**”), in connection with the sale from time to time by the Company of shares of its common stock, par value \$0.001 per share (the “**Shares**”), having an aggregate offering price of up to \$6,560,000 through Stifel, Nicolaus & Company, Incorporated (“**Stifel**”), as the sales agent, to be issued pursuant to a registration statement on Form S-3 (File No. 333-278288) filed by the Company with the Securities and Exchange Commission (the “**Commission**”) on March 29, 2024 (the “**Registration Statement**”), the base prospectus included in the Registration Statement (the “**Base Prospectus**”), the prospectus supplement dated May 10, 2024 (with the Base Prospectus, the “**Prospectus**”), and that certain At-the-Market Equity Offering Sales Agreement, dated as of May 28, 2019, and as amended on April 9, 2021 and May 8, 2024, by and between the Company and Stifel (the “**Sales Agreement**”).

We have reviewed and are familiar with such corporate proceedings and other matters as we have deemed necessary for this opinion.

In rendering the opinion set forth below, we have assumed that (i) all information contained in all documents reviewed by us is true and correct; (ii) all signatures on all documents examined by us are genuine; (iii) all documents submitted to us as originals are authentic and all documents submitted to us as copies conform to the originals of those documents; and (iv) each natural person signing any document reviewed by us had the legal capacity to do so.

Based upon, subject to and limited by the foregoing, we are of the opinion that, as of the date hereof, the Shares have been duly authorized by all necessary corporate action on the part of the Company and, following (i) issuance and delivery of the Shares in the manner contemplated by the Sales Agreement, and (ii) receipt by the Company of the consideration for the Shares specified in the resolutions of the Board of Directors of the Company and the Pricing Committee of such Board, the Shares will be validly issued, fully paid, and nonassessable.

In providing this opinion, we have relied as to certain matters on information obtained from public officials and officers or agents of the Company.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters. This opinion is limited to matters governed by the Nevada Revised Statutes (including the statutory provisions and reported judicial decisions interpreting such law) and the laws of the State of Nevada. We disclaim any obligation to update this opinion or otherwise advise you of any change in any of these sources of law or subsequent legal or factual developments which might affect any matters or the opinion set forth herein, nor do we deliver any opinion as to the extent to which any laws other than the laws of the State of Nevada apply or the effect of any such other laws should they apply.

This opinion letter has been prepared for use in connection with the Quarterly Report on Form 10-Q to be filed by the Company on May 10, 2024. We assume no obligation to advise you of any changes in the foregoing subsequent to the effective date of this opinion letter.

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Company's Quarterly Report on Form 10-Q and to the use of our name under the caption "Legal Matters" in the Registration Statement and in the Prospectus and any supplement thereto. In giving this consent, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission promulgated thereunder.

Sincerely,

/s/ Gary R. Henrie

Gary R. Henrie

\*\*\* Certain identified information has been excluded from this exhibit because it is both not material and the type the registrant treats as private or confidential

SPP No. [REDACTED], PTS-1, Mod 2

**MODIFICATION NO. 2 TO  
UMBRELLA STRATEGIC PARTNERSHIP PROJECT NO. [REDACTED] PTS-1**

**PROJECT TASK STATEMENT**

No. 1

**BETWEEN**

**Battelle Energy Alliance, LLC**  
(hereinafter "Contractor" or "BEA")

**AND**

**Lightbridge Corporation**  
(hereinafter "Sponsor" or "Lightbridge")

03/25/2024

**Produce U-Zr Coupons for Capsule Irradiation**

This Project Task Statement (PTS) is under the authority and subject to all terms and conditions of Umbrella Strategic Partnership Project Agreement (SPP) No. [REDACTED].

This Modification No. 2 is to increase the costs and update the Sponsor's technical contact.

**A. PURPOSE**

The fabrication and characterization of specimens is an important component of any irradiation experiment. The development of a casting and extrusion process to create the desired fuel form for this experiment is substantial. The work will include developing a casting process, heat treating billets from the casting process, machining them into a shape suitable for extrusion, developing an extrusion process, heat treating extruded slugs, and characterizing microstructural and compositional features of the final extruded product. Any necessary development work will be done with depleted uranium (DU). After the process is proven successful, it will be repeated with enriched uranium to produce fuel slugs for the related irradiation experiment.

**B. SCOPE**

**Duration of PTS**

The period of performance of this PTS is [REDACTED].

**Technical Objectives**

This PTS is focused on the proof of ability to fabricate a delta-phase U-Zr ingot that is suitable for extruding fuel coupon specimen in accordance with Lightbridge fuel specifications. Fabrication test specimen will be made with depleted uranium (DU), irradiation test specimens will be made with enriched uranium. Final fuel coupons will match the requirements specified by previous experiment design documents (e.g., enrichment). Tasks in this PTS cover the following work:



- Determining casting specifications and validating extrusion parameters for fuel coupon fabrication;
- Casting U-Zr ingot; and characterization of cast ingot
- Extrusion of coupons from ingot;
- Characterization of extruded product; and
- Final machining and finishing operations to the requirements of the experiment design.

**Tasks and Division of Responsibilities**

**Task 1: Create Fuel Specification to Support Casting**

[REDACTED]

**Task 2: Fabrication Mockup**

**Task 2.1: Extrusion Method Tooling**

[REDACTED]

**Task 2.2: Casting Demonstration**

[REDACTED]

[REDACTED]

**Task 2.3: Extrusion Demonstration**

[REDACTED]

**Task 3: Casting of Enriched Ingot**

[REDACTED]

**Task 4: Fabrication of Enriched Coupon**

[REDACTED]

**Task 5: Characterization of Ingot & Extruded Products**

**Task 5.1: Microstructural Characterization**

[REDACTED]

[Redacted]

[Redacted]

**Task 5.2: Thermal Property Assessment**

[Redacted]

[Redacted]

**Task 5.3: Mechanical Property Assessment**

[Redacted]





Task No.	Task	Contractor Role/Responsibilities	Sponsor's Role
1	Create Specification to Support Casting	[REDACTED]	[REDACTED]
2	Demonstration/ Mockup of Methods	[REDACTED]	[REDACTED]
3	Casting of Ingot	[REDACTED]	[REDACTED]

Task No.	Task	Contractor Role/Responsibilities	Sponsor's Role
		[REDACTED]	[REDACTED]
4	Extrusion of Coupons	[REDACTED]	[REDACTED]
5	Characterization of Ingot & Extruded Products	[REDACTED]	[REDACTED]

**Hold Points**

Task No.	Do not proceed to:	Until this is completed:
1	Task No. 2.2/2.3	[REDACTED]
2.1	Task 2.3	[REDACTED]
2	Task No. 3	[REDACTED]
3	Task No. 4	[REDACTED]
4	Task No. 5	[REDACTED]

**C. ASSUMPTIONS**

- [REDACTED]
- [REDACTED]

- [REDACTED]
- [REDACTED]

**D. TECHNICAL CONTACTS**

**For Contractor:**

[REDACTED]

**For Sponsor:**

[REDACTED]

**E. PROJECT MANAGEMENT CONTACTS**

**For Contractor:**

[REDACTED]

**For Sponsor:**

[REDACTED]

**F. COSTS**

1. The Contractor estimated cost for the work to be performed under this Agreement is \$1,708,623.00.
2. The Contractor has no obligation to continue or complete performance of the work at a cost in excess of its estimated cost, including any subsequent amendment.
3. The Contractor agrees to provide at least 30 days' notice to the Sponsor if the actual cost to complete performance will exceed its estimated cost.

**Payment Terms:**

[REDACTED]

[REDACTED]

The Sponsor shall pay the Contractor as follows:

A. Advance Payment. [REDACTED]

B. Monthly Payments. [REDACTED]

1. Invoices will be submitted electronically to the Sponsor at the following address:

[accounting@ltbridge.com](mailto:accounting@ltbridge.com)

2. Payments by the Sponsor will be directed as follows:

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

[REDACTED]

C. Applicable Currency. All payments due the Contractor under this Agreement, including cost estimates and obligations of funds, shall be in United States dollars (U.S.\$).

**G. FINANCIAL AND PROJECT PERFORMANCE REPORTING**

BEA will provide monthly cost and schedule data outputs from INL standard project reporting tools to Sponsor after each end of fiscal year (FY) month processing. A minimum subset of data should include Schedule and Cost Performance Indices, a standard Cost Performance Report with performance measurement baseline (PMB) curve to include EAC/ETC data as well as any variances & associated descriptions/ corrective action plans (this is typically called a "format 5

VAR” or agreed equivalent). Reporting detail shall be provided at the same work break down structure (WBS) level as agreed upon in the project schedule and cost estimate developed by BEA in support of this PTS.

*IN WITNESS WHEREOF, the Parties hereto have executed this Project Task Statement Modification No. 2 by their authorized representatives on the dates shown below.*

**BATTELLE ENERGY ALLIANCE, LLC:**

Name: [REDACTED]  
Title: [REDACTED]  
Date: [REDACTED]  
Signature: [REDACTED]

**LIGHTBRIDGE CORPORATION:**

Name: Andrey Mushakov  
Title: Executive Vice President  
Date: 3/26/2024  
Signature: [REDACTED]



**Certification of Principal Executive Officer**

I, Seth Grae, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Lightbridge Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its condensed consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 10, 2024

By: /s/ Seth Grae

Seth Grae  
Principal Executive Officer

**Certification of Principal Financial Officer**

I, Larry Goldman, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Lightbridge Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its condensed consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 10, 2024

By: /s/ Larry Goldman  
Larry Goldman  
Chief Financial Officer  
(Principal Financial and Principal Accounting  
Officer)

## Section 1350 Certifications

## STATEMENT FURNISHED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

The undersigned, the Chief Executive Officer and Chief Financial Officer of Lightbridge Corporation, each hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to his knowledge on the date hereof:

1. The Quarterly Report on Form 10-Q of Lightbridge Corporation for the quarter ended March 31, 2024, filed on the date hereof with the Securities and Exchange Commission (the Report), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of Lightbridge Corporation.

Date: May 10, 2024

By: /s/ Seth Grae  
Name: Seth Grae  
Title: President, Chief Executive Officer and Director  
(Principal Executive Officer)

By: /s/ Larry Goldman  
Name: Larry Goldman  
Title: Chief Financial Officer  
(Principal Financial Officer and Principal Accounting Officer)