

LIGHTBRIDGE Corp
Form POS AM
September 29, 2016

As filed with the Securities and Exchange Commission on September 29, 2016

Registration Statement No. 333-207507

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

**Amendment No. 1
to
Post-Effective Amendment No. 1
to
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

LIGHTBRIDGE CORPORATION

(Exact name of registrant as specified in its charter)

Nevada
(State or other jurisdiction of
incorporation or organization)

1000
(Primary Standard Industrial
Classification Code Number)
11710 Plaza America Drive, Suite 2000
Reston, VA 20190
(571) 730-1200

91-1975651
(I.R.S. Employer
Identification Number)

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Seth Grae
President and CEO
Lightbridge Corporation
11710 Plaza America Drive, Suite 2000
Reston, VA 20190
(571) 730-1200

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copy to:

David R. Crandall
Hogan Lovells US LLP
1601 Wewatta Street, Suite 900
Denver, Colorado 80202
(303) 899-7300

Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement becomes effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box:

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

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

Large accelerated filer

Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company)

Smaller reporting company

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

EXPLANATORY NOTE

On October 19, 2015 Lightbridge Corporation (the Company) filed a registration statement with the Securities and Exchange Commission on Form S-1 (Registration No. 333-207507), which was amended on December 11, 2015 (as so amended, the Registration Statement) and declared effective by the Securities and Exchange Commission (the SEC) on December 22, 2015. The Registration Statement registered for resale up to 1,146,040 shares of the common stock of the Company by Aspire Capital Fund, LLC (Aspire Capital). The shares of common stock being offered by Aspire Capital are issued or issuable pursuant to a common stock purchase agreement between the Company and Aspire Capital.

This Post-Effective Amendment No. 1 to the Registration Statement (this Post-Effective Amendment No. 1) is being filed to update the Registration Statement by including, among other things, a statement providing for the incorporation by reference of any future filings the Company will make with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Securities Exchange Act of 1934, as amended, and a related undertaking. All share and per share information in this Post-Effective Amendment No. 1 has been adjusted to reflect a one-for-five reverse stock split of the Company s common stock, which was effective July 20, 2016.

No additional securities are being registered under this Post-Effective Amendment No. 1. All applicable registration fees were paid at the time of the initial filing of the Registration Statement.

The information in this prospectus is not complete and may be changed. The selling shareholder may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities, and the selling shareholder is not soliciting offers to buy these securities in any state where the offer or sale of these securities is not permitted.

Subject to Completion, Dated September 29, 2016

PROSPECTUS

LIGHTBRIDGE CORPORATION

**1,146,040 Shares
Common Stock**

This prospectus relates to the sale of up to 1,146,040 shares of our common stock by Aspire Capital Fund, LLC. Aspire Capital is also referred to in this prospectus as the selling shareholder. The prices at which the selling shareholder may sell the shares will be determined by the prevailing market price for the shares or in negotiated transactions. We will not receive proceeds from the sale of the shares by the selling shareholder. However, we have received proceeds of \$2.0 million, and may receive additional proceeds of up to \$8.0 million, for an aggregate of \$10.0 million, from the sale of our common stock to the selling shareholder, pursuant to a common stock purchase agreement entered into with the selling shareholder on September 4, 2015.

The selling shareholder is an underwriter within the meaning of the Securities Act of 1933, as amended. We will pay the expenses of registering these shares, but all selling and other expenses incurred by the selling shareholder will be paid by the selling shareholder.

Our common stock is listed on the Nasdaq Capital Market under the symbol **LTBR**. On September 28, 2016, the last reported sale price of our common stock on the Nasdaq Capital Market was \$1.84 per share.

You should read this prospectus and any prospectus supplement, together with additional information described under the heading **Where You Can Find More Information**, carefully before you invest in any of our securities.

Investing in our securities involves risks. See **Risk Factors beginning on page 6 of this prospectus and the risks and uncertainties described in the documents we file with the Securities and Exchange Commission that are incorporated in this prospectus by reference for certain risks and uncertainties relating to an investment in our securities.**

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

This prospectus is dated 2016.

TABLE OF CONTENTS

| | |
|---|-----------|
| <u>CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS</u> | <u>1</u> |
| <u>SUMMARY</u> | <u>2</u> |
| <u>RISK FACTORS</u> | <u>6</u> |
| <u>THE ASPIRE CAPITAL TRANSACTION</u> | <u>8</u> |
| <u>USE OF PROCEEDS</u> | <u>12</u> |
| <u>PRICE RANGE OF COMMON STOCK AND DIVIDEND POLICY</u> | <u>12</u> |
| <u>DILUTION</u> | <u>13</u> |
| <u>DESCRIPTION OF CAPITAL STOCK</u> | <u>14</u> |
| <u>SELLING SHAREHOLDER</u> | <u>17</u> |
| <u>PLAN OF DISTRIBUTION</u> | <u>18</u> |
| <u>LEGAL MATTERS</u> | <u>20</u> |
| <u>EXPERTS</u> | <u>20</u> |
| <u>WHERE YOU CAN FIND ADDITIONAL INFORMATION</u> | <u>20</u> |
| <u>INCORPORATION OF CERTAIN INFORMATION BY REFERENCE</u> | <u>21</u> |

We have not, and the selling shareholder has not, authorized anyone to provide you with information different from that contained or incorporated by reference in this prospectus or in any supplement to this prospectus or free writing prospectus, and neither we nor the selling shareholder takes any responsibility for any other information that others may give you. This prospectus is not an offer to sell, nor is it a solicitation of an offer to buy, the securities in any jurisdiction where the offer or sale is not permitted. You should not assume that the information contained in this prospectus or any prospectus supplement or free writing prospectus is accurate as of any date other than the date on the front cover of those documents, or that the information contained in any document incorporated by reference is accurate as of any date other than the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or any sale of a security. Our business, financial condition, results of operations and prospects may have changed since those dates.

This prospectus relates to the offering of our common stock. Before buying any of our common stock, you should carefully read this prospectus, any supplement to this prospectus, the information and documents incorporated herein by reference and the additional information under the heading "Where You Can Find Additional Information" and "Incorporation of Certain Information by Reference." These documents contain important information that you should consider when making your investment decision.

References in this prospectus to Lightbridge, we, us, our, our Company, or the Company mean Lightbridge Corporation, a Nevada corporation, and its consolidated subsidiaries, unless we state otherwise or the context indicates otherwise.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains or incorporates forward-looking statements within the meaning of section 27A of the Securities Act of 1933, as amended, or the Securities Act, and section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. These forward-looking statements are management's beliefs and assumptions. In addition, other written or oral statements that constitute forward-looking statements are based on current expectations, estimates and projections about the industry and markets in which we operate and statements may be made by or on our behalf. Words such as should, could, may, will, expect, anticipate, intend, target, plan, variations of such words and similar expressions are intended to identify such forward-looking statements. Such statements include, among others, (i) those concerning market and business segment growth, demand and acceptance of our nuclear energy consulting services and nuclear fuel technology business, (ii) any projections of sales, earnings, revenue, margins or other financial items, (iii) any statements of the plans, strategies and objectives of management for future operations, (iv) any statements regarding future economic conditions or performance, (v) uncertainties related to conducting business in foreign countries, as well as (vi) all assumptions, expectations, predictions, intentions or beliefs about future events. These statements are not guarantees of future performance and involve substantial risks, uncertainties and assumptions that are difficult to predict. Important factors that could cause actual results to differ materially from those in such forward-looking statements are set forth in Item 1A Risk Factors in our Annual Report on Form 10-K for the year ended December 31, 2015, as amended, our other filings with the Securities and Exchange Commission, or SEC, and any supplement to this prospectus and include but are not limited to:

our ability to commercialize our nuclear fuel technology;

our ability to attract new customers;

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;

public perception of nuclear energy generally;

general economic and business conditions in the local economies in which we regularly conduct business, which can affect demand for our services;

changes in laws, rules and regulations governing our business;

development and utilization of our intellectual property; and

potential and contingent liabilities.

The foregoing list of important factors is not intended to be and is not exhaustive. We base our forward-looking statements on our management's beliefs and assumptions based on information available to our management at the time the statements are made. Actual outcomes and results may differ materially from those expressed, implied or projected in such forward-looking statements and therefore you should not place undue reliance on them. Forward-looking statements speak only as of the date on which they are made. Except as required under the federal securities laws and the rules and regulations of the SEC, we do not have any intention or obligation to update publicly any forward-looking statements after the distribution of this prospectus, whether as a result of new information, future events, changes in assumptions or otherwise.

SUMMARY

This summary highlights selected information about us, this offering and selected information appearing elsewhere in this prospectus and in the documents we incorporate by reference herein. This summary is not complete and does not contain all of the information that you should consider before deciding whether to invest in our common stock. You should read this entire prospectus carefully, including the Risk Factors section beginning on page 6 of this prospectus and the Risk Factors section of our Annual Report on Form 10-K for the year ended December 31, 2015, as amended, and our Quarterly Reports on Form 10-Q, as amended, our financial statements and the related notes and the other documents incorporated by reference in this prospectus. Unless otherwise noted, all share and per share information has been adjusted to reflect the one-for-five reverse stock split of our common stock that became effective July 20, 2016.

About Lightbridge Corporation

Lightbridge is a leading nuclear fuel technology company and we participate in the nuclear power industry in the United States and internationally. Our mission is to be a world leader in the design and licensing of nuclear fuels that we anticipate will be economically attractive, enhance reactor safety, proliferation resistant, and produce less waste than current generation nuclear fuels, and to provide world-class strategic advisory services to governments and utilities seeking to develop or expand civil nuclear power programs.

Our business operations can be categorized in two segments:

Nuclear Fuel Technology Business. We develop next generation nuclear fuel technology that has the potential to significantly increase the power output of commercial reactors, reducing the cost of generating electricity and the amount of nuclear waste on a per-megawatt-hour basis and enhancing reactor safety and the proliferation resistance of spent fuel. Our main focus is on our nuclear fuel technology business segment.

Nuclear Energy Consulting Business. We provide nuclear power consulting and strategic advisory services to commercial and governmental entities worldwide. Our nuclear consulting business operations are intended to help defray a portion of the costs relating to the development of our nuclear fuel technology.

We were incorporated under the laws of the State of Nevada on February 2, 1999 and engaged in businesses other than our current business until October 6, 2006, when we acquired our wholly-owned subsidiary Thorium Power, Inc.

The address of our principal executive office is 11710 Plaza America Drive, Suite 2000, Reston, Virginia, 20190, and our telephone number is (571) 730-1200. We maintain a website at www.ltbridge.com that contains information about our Company, though no information contained on our website is part of this prospectus.

The Offering

Common stock offered Up to 1,146,040 shares, including 762,686 shares previously issued to Aspire Capital by the selling shareholder

Common stock outstanding 4,799,955 shares (as of September 12, 2016)(1)

Use of proceeds The selling shareholder will receive all of the proceeds from the sale of the shares offered for sale by it under this prospectus. We will not receive proceeds from the sale of the shares by the selling shareholder. However, we may receive up to \$10.0 million in proceeds from the sale of our common stock to the selling shareholder under the common stock purchase agreement described below. Any proceeds from the selling shareholder that we receive under the purchase agreement are expected to be used for working capital and general corporate purposes.

Nasdaq Capital Market symbol LTBR

Risk factors See Risk Factors beginning on page 6 of this prospectus and the other information included in, or incorporated by reference into, this prospectus for a discussion of certain factors you should carefully consider before deciding to invest in shares of our common stock.

(1) The number of shares of our common stock outstanding excludes 1,463,003 shares of our common stock issuable upon the exercise of stock options outstanding as of June 30, 2016 and 1,272,622 shares of our common stock issuable upon the exercise of warrants outstanding as of September 12, 2016. Unless otherwise indicated, all information in this prospectus assumes no exercise of the outstanding options or warrants described above.

Purchase Agreement with Aspire Capital

On September 4, 2015, we entered into a common stock purchase agreement (referred to in this prospectus as the Purchase Agreement), with Aspire Capital Fund, LLC, an Illinois limited liability company (referred to in this prospectus as Aspire Capital or the selling shareholder), which provides that, upon the terms and subject to the conditions and limitations set forth therein, Aspire Capital is committed to purchase up to an aggregate of \$10.0 million of our shares of common stock over the approximately 24-month term of the Purchase Agreement, which commenced in January 2016. In consideration for entering into the Purchase Agreement, concurrently with the execution of the Purchase Agreement, we issued to Aspire Capital 60,000 shares of our common stock as a commitment fee (referred to in this prospectus as the Commitment Shares). We also concurrently entered into a registration rights agreement with Aspire Capital (referred to in this prospectus as the Registration Rights Agreement), in which we agreed to file one or more registration statements, including the registration statement of which this prospectus is a part, as permissible and necessary to register under the Securities Act the sale of the shares of our common stock that have been and may be issued to Aspire Capital under the Purchase Agreement.

As of September 12, 2016, there were 4,799,955 shares of our common stock outstanding (4,619,325 shares held by non-affiliates). If all of the 1,146,040 shares of our common stock offered hereby were issued and outstanding as of the date hereof, such shares would represent approximately 22.1% of the total common stock outstanding or approximately 22.9% of the non-affiliate shares of common stock outstanding as of September 12, 2016. The aggregate number of shares that we can issue to Aspire Capital under the Purchase Agreement may in no case exceed 3,000,000 shares of our common stock, which is the number of shares approved for issuance under the Purchase Agreement by the Company's stockholders at our 2016 Annual Meeting of Stockholders, unless stockholder approval is obtained to issue more; provided that at no point in time shall Aspire Capital (together with its affiliates) beneficially own more than 19.99% of our common stock. As of September 12, 2016, we had issued 762,686 shares of our common stock to Aspire Capital under the Purchase Agreement (including the 60,000 Commitment Shares) for aggregate proceeds to the Company of approximately \$2.0 million.

Pursuant to the Purchase Agreement and the Registration Rights Agreement, we are registering 1,146,040 shares of our common stock under the Securities Act, which includes 762,686 shares that have already been issued to Aspire Capital and 383,354 shares of common stock which we may issue to Aspire Capital. All 1,146,040 shares of common stock are being offered pursuant to this prospectus. Under the Purchase Agreement, we have the right but not the obligation to issue more than the 1,146,040 shares of common stock included in this prospectus to Aspire Capital. As of the date hereof, we do not have any plans or intent to issue to Aspire Capital any shares of common stock in addition to the 1,146,040 shares of common stock offered hereby.

On any trading day on which the closing sale price of our common stock equals or exceeds \$0.50 per share, we have the right, in our sole discretion, to present Aspire Capital with a purchase notice (each a Purchase Notice) directing Aspire Capital (as principal) to purchase up to 20,000 shares of our common stock per trading day, provided that the aggregate price of such purchase shall not exceed \$250,000 per trading day, up to \$10.0 million of our common stock in the aggregate at a per share price (the Purchase Price) calculated by reference to the prevailing market price of our common stock (as more specifically described below).

In addition, on any date on which we submit a Purchase Notice for 20,000 shares to Aspire Capital and the closing sale price of our stock equals or exceeds \$0.50 per share of common stock, we also have the right, in our sole discretion, to present Aspire Capital with a volume-weighted average price purchase notice (each a VWAP Purchase Notice) directing Aspire Capital to purchase an amount of stock equal to up to 30% of the aggregate shares of the Company's common stock traded on the Nasdaq Capital Market on the next trading day (the VWAP Purchase Date), subject to a maximum number of shares we may determine (the VWAP Purchase Share Volume Maximum) and a minimum trading price (the VWAP Minimum Price Threshold), as more specifically described below. The purchase price per Purchase Share pursuant to such VWAP Purchase Notice (the VWAP Purchase Price) is calculated by reference to the prevailing market price of our common stock (as more specifically described below).

The Purchase Agreement provides that the Company and Aspire Capital shall not effect any sales under the Purchase Agreement on any purchase date where the closing sale price of our common stock is less than \$0.50 per share (the Floor Price). The Floor Price and the respective prices and share numbers in the preceding paragraphs shall be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction. There are no trading volume requirements or restrictions under the Purchase Agreement, and we will control the timing and amount of any sales of our common stock to Aspire Capital. Aspire Capital has no right to require any sales by us, but is obligated to make purchases from us as we direct in accordance with the Purchase Agreement. There are no limitations on use of proceeds, financial or business covenants, restrictions on future fundings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement. The Purchase Agreement may be terminated by us at any time, at our discretion, without any penalty or cost to us.

RISK FACTORS

*An investment in our common stock involves a high degree of risk. Prior to making a decision about investing in our common stock, you should carefully consider the risk factors described below and the risk factors discussed in the sections entitled *Risk Factors* contained in our Annual Report on Form 10-K for the year ended December 31, 2015, our Quarterly Reports on Form 10-Q, and in any applicable prospectus supplement and our other filings with the SEC and incorporated by reference in this prospectus, together with all of the other information contained in this prospectus, or any applicable prospectus supplement. Additional risks and uncertainties not presently known to us, or that we currently view as immaterial, may also impair our business. If any of the risks or uncertainties described in our SEC filings or any prospectus supplement or any additional risks and uncertainties actually occur, our business, financial condition and results of operations could be materially and adversely affected. In that case, the trading price of our common stock could decline and you might lose all or part of your investment.*

Risks Relating to Our Securities

We will need to raise significant additional capital in the future to expand our operations and continue our research and development and we may be unable to raise such funds when needed and on acceptable terms.

We will need to raise significant additional capital in order to continue our research and development activities and fund our operations. Our current plan is to seek external funding from third party sources to support a large portion of the remaining development, testing and demonstration activities relating to our metallic nuclear fuel technology. The extent to which we utilize the Purchase Agreement with Aspire Capital as a source of funding will depend on a number of factors, including the prevailing market price of our common stock, the volume of trading in our common stock and the extent to which we are able to secure funds from other sources. The number of shares that we may sell to Aspire Capital under the Purchase Agreement on any given day and during the term of the Purchase Agreement is limited. See *The Aspire Capital Transaction* for additional information. Additionally, we and Aspire Capital may not effect any sales of shares of our common stock under the Purchase Agreement during the continuance of an event of default or on any trading day that the closing sale price of our common stock is less than \$0.50 per share. Even if we are able to access the full \$10.0 million under the Purchase Agreement, we will still need additional capital to fully implement our business, operating and development plans.

When we elect to raise additional funds or additional funds are required, we may raise such funds from time to time through public or private equity offerings, debt financings or other financing alternatives, as well as through sales of common stock to Aspire Capital under the Purchase Agreement. Additional equity or debt financing or other alternative sources of capital may not be available to us on acceptable terms, if at all.

If we raise additional funds by issuing equity securities, our stockholders will experience dilution. Debt financing, if available, would result in substantial fixed payment obligations and may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. Any debt financing or additional equity that we raise may contain terms, such as liquidation and other preferences, which are not favorable to us or our stockholders. If we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we may not be able to fully develop our nuclear fuel designs, our future operations will be limited, and our ability to generate revenues and achieve or sustain future profitability will be substantially harmed.

The sale of our common stock to Aspire Capital may cause substantial dilution to our existing shareholders and the sale of the shares of common stock acquired by Aspire Capital could cause the price of our common stock to decline.

We are registering for sale the 60,000 Commitment Shares that we have issued and 1,086,040 shares that we may sell to Aspire Capital under the Purchase Agreement. It is anticipated that shares registered in this offering will be sold over a period of up to approximately 24 months from the date sales commenced under the Purchase Agreement in January 2016. The number of shares ultimately offered for sale by Aspire Capital under this prospectus is dependent upon the number of shares we elect to sell to Aspire Capital under the Purchase Agreement. Depending upon market liquidity at the time, sales of shares of our common stock under the Purchase Agreement may cause the trading price of our common stock to decline.

Aspire Capital may ultimately purchase all, some or none of the \$10.0 million of common stock that, together with the 60,000 Commitment Shares, is the subject of this prospectus. Aspire Capital may sell all, some or none of our shares that it holds or comes to hold under the Purchase Agreement. Sales by Aspire Capital of shares acquired pursuant to the Purchase Agreement under the registration statement, of which this prospectus is a part, may result in dilution to the interests of other holders of our common stock. The sale of a substantial number of shares of our common stock by Aspire Capital in this offering, or anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales. However, we have the right to control the timing and amount of sales of our shares to Aspire Capital, and the Purchase Agreement may be terminated by us at any time at our discretion without any penalty or cost to us.

There may be volatility in our stock price, which could negatively affect investments, and stockholders may not be able to resell their shares at or above the value they originally purchased such shares.

The market price of our common stock may fluctuate significantly in response to a number of factors, some of which are beyond our control, including:

quarterly variations in operating results;

changes in financial estimates by securities analysts;

changes in market valuations of other similar companies;

limited liquidity in our common stock;

announcements by us or our competitors of new products or of significant technical innovations, contracts, receipt of (or failure to obtain) government funding or support, acquisitions, strategic partnerships or joint ventures;

additions or departures of key personnel;

any deviations in net sales or in losses from levels expected by securities analysts, or any reduction in political support from levels expected by securities analysts;

future sales of common stock; and

nuclear accidents or other adverse nuclear industry events.

The stock market may experience extreme volatility that is often unrelated to the performance of particular companies. These market fluctuations may cause our stock price to fall regardless of its performance.

THE ASPIRE CAPITAL TRANSACTION

General

On September 4, 2015, we entered into the Purchase Agreement which provides that, upon the terms and subject to the conditions and limitations set forth therein, Aspire Capital is committed to purchase up to an aggregate of \$10.0 million of our shares of common stock over the term of the Purchase Agreement. In consideration for entering into the Purchase Agreement, concurrently with the execution of the Purchase Agreement, we issued to Aspire Capital the 60,000 Commitment Shares. Concurrently with entering into the Purchase Agreement, we also entered into the Registration Rights Agreement, in which we agreed to file one or more registration statements as permissible and necessary to register under the Securities Act, the sale of the shares of our common stock that have been and may be issued to Aspire Capital under the Purchase Agreement.

As of September 12, 2016, there were 4,799,955 shares of our common stock outstanding (4,619,325 shares held by non-affiliates). If all of the 1,146,040 shares of our common stock offered hereby were issued and outstanding as of the date hereof, such shares would represent approximately 22.1% of the total common stock outstanding or approximately 22.9% of the non-affiliate shares of common stock outstanding as of September 12, 2016. The aggregate number of shares that we can issue to Aspire Capital under the Purchase Agreement may in no case exceed 3,000,000 shares of our common stock, which is the number of shares approved for issuance under the Purchase Agreement by the Company's stockholders at our 2016 Annual Meeting of Stockholders, unless stockholder approval is obtained to issue more; provided that at no point in time shall Aspire Capital (together with its affiliates) beneficially own more than 19.99% of our common stock. As of September 12, 2016, we had issued 762,686 shares of our common stock to Aspire Capital under the Purchase Agreement (including the 60,000 Commitment Shares) for aggregate proceeds to the Company of approximately \$2.0 million.

Pursuant to the Purchase Agreement and the Registration Rights Agreement, we are registering 1,146,040 shares of our common stock under the Securities Act, which includes 762,686 shares that have already been issued to Aspire Capital and 383,354 shares of common stock which we may issue to Aspire Capital. All 1,146,040 shares of common stock are being offered pursuant to this prospectus. Under the Purchase Agreement, we have the right but not the obligation to issue more than the 1,146,040 shares of common stock included in this prospectus to Aspire Capital. As of the date hereof, we do not have any plans or intent to issue to Aspire Capital any shares of common stock in addition to the 1,146,040 shares of common stock offered hereby.

On any trading day on which the closing sale price of our common stock is not less than \$0.50 per share, we have the right, in our sole discretion, to present Aspire Capital with a Purchase Notice, directing Aspire Capital (as principal) to purchase up to 20,000 shares of our common stock per business day, up to \$10.0 million of our common stock in the aggregate at a Purchase Price calculated by reference to the prevailing market price of our common stock over the preceding 12-business day period (as more specifically described below).

In addition, on any date on which we submit a Purchase Notice to Aspire Capital for 20,000 Purchase Shares and our stock price is not less than \$0.50 per share, we also have the right, in our sole discretion, to present Aspire Capital with a VWAP Purchase Notice directing Aspire Capital to purchase an amount of stock equal to up to 30% of the aggregate shares of the Company's common stock traded on the Nasdaq Capital Market on the next trading day, subject to the VWAP Purchase Share Volume Maximum and the VWAP Minimum Price Threshold. The VWAP Purchase Price is calculated by reference to the prevailing market price of our common stock (as more specifically described below).

There are no trading volume requirements or restrictions under the Purchase Agreement, and we will control the timing and amount of any sales of our common stock to Aspire Capital. Aspire Capital has no right to require any sales by us, but is obligated to make purchases from us as we direct in accordance with the Purchase Agreement. There are no limitations on use of proceeds, financial or business covenants, restrictions on future fundings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement. Aspire Capital may not assign its rights or obligations under the Purchase Agreement.

Purchase of Shares under the Purchase Agreement

Under the Purchase Agreement, on any trading day selected by us on which the closing sale price of our common stock equals or exceeds \$0.50 per share, we may direct Aspire Capital to purchase up to 20,000 shares of our common stock per trading day. The Purchase Price of such shares is equal to the lesser of:

the lowest sale price of our common stock on the purchase date; or

the arithmetic average of the three lowest closing sale prices for our common stock during the twelve consecutive trading days ending on the trading day immediately preceding the purchase date.

In addition, on any date on which we submit a Purchase Notice to Aspire Capital for purchase of 20,000 shares, we also have the right to direct Aspire Capital to purchase an amount of stock equal to up to 30% of the aggregate shares of our common stock traded on the Nasdaq Capital Market on the next trading day, subject to the VWAP Purchase Share Volume Maximum and the VWAP Minimum Price Threshold, which is equal to the greater of (a) 80% of the closing price of the Company's common stock on the business day immediately preceding the VWAP Purchase Date or (b) such higher price as set forth by the Company in the VWAP Purchase Notice. The VWAP Purchase Price of such shares is the lower of:

the closing sale price on the VWAP Purchase Date; or

95% of the volume-weighted average price for our common stock traded on the Nasdaq Capital Market:

on the VWAP Purchase Date, if the aggregate shares to be purchased on that date have not exceeded the VWAP Purchase Share Volume Maximum; or

during that portion of the VWAP Purchase Date until such time as the sooner to occur of (i) the time at which the aggregate shares traded on the Nasdaq Capital Market exceed the VWAP Purchase Share Volume Maximum or (ii) the time at which the sale price of the Company's common stock falls below the VWAP Minimum Price Threshold.

The purchase price will be adjusted for any reorganization, recapitalization, non-cash dividend, stock split, or other similar transaction occurring during the trading day(s) used to compute the purchase price. We may deliver multiple Purchase Notices and VWAP Purchase Notices to Aspire Capital from time to time during the term of the Purchase Agreement, so long as the most recent purchase has been completed.

Minimum Share Price

Under the Purchase Agreement, we and Aspire Capital may not effect any sales of shares of our common stock under the Purchase Agreement on any trading day that the closing sale price of our common stock is less than \$0.50 per share.

Events of Default

Generally, Aspire Capital may terminate the Purchase Agreement upon the occurrence of any of the following events of default:

the effectiveness of any registration statement that is required to be maintained effective pursuant to the terms of the Registration Rights Agreement between us and Aspire Capital lapses for any reason (including, without limitation, the issuance of a stop order) or is unavailable to Aspire Capital for sale of our shares of common stock, and such lapse or unavailability continues for a period of ten consecutive business days or for more than an aggregate of thirty business days in any 365-day period, which is not in connection with a post-effective amendment to any such registration statement; in connection with any post-effective amendment to such registration statement that is required to be declared effective by the SEC, such lapse or unavailability may continue for a period of no more than 30 consecutive business days, with an extension for up to an additional 30 days if we receive a comment letter from the SEC in connection with such post-effective amendment;

the suspension from trading or failure of our common stock to be listed on our principal market for a period of three consecutive business days;

the delisting of our common stock from the Nasdaq Capital Market, and the Company's common stock is not immediately thereafter trading on the New York Stock Exchange, the NYSE MKT, the Nasdaq Global Select Market, the Nasdaq Global Market, the OTB Bulletin Board or the OTCQB marketplace or OTCQX marketplace of the OTC Markets Group;

our transfer agent's failure to issue to Aspire Capital shares of our common stock which Aspire Capital is entitled to receive under the Purchase Agreement within five business days after an applicable purchase date;

any breach by us of any representation, warranty, covenant or other term or condition contained in the Purchase Agreement or any related agreement which could have a material adverse effect on us, subject to a cure period of five business days;

if we become insolvent or are generally unable to pay our debts as they become due;

any participation or threatened participation in insolvency or bankruptcy proceedings by or against us; or

if the aggregate number of shares of common stock issued to Aspire Capital under the Purchase Agreement exceeds 3,000,000, unless and until further stockholder approval is obtained.

Our Termination Rights

The Purchase Agreement may be terminated by us at any time, at our discretion, without any penalty or cost to us.

No Short-Selling or Hedging by Aspire Capital

Aspire Capital has agreed that neither it nor any of its agents, representatives and affiliates shall engage in any direct or indirect short-selling or hedging of our common stock during any time prior to the termination of the Purchase Agreement.

Effect of Performance of the Purchase Agreement on Our Stockholders

The Purchase Agreement does not limit the ability of Aspire Capital to sell any or all of the 1,146,040 shares registered in this offering. It is anticipated that shares registered in this offering will be sold over a period of up to approximately 24 months from the date sales commenced under the Purchase Agreement in January 2016. The sale by Aspire Capital of a significant amount of shares registered in this offering at any given time could cause the market price of our common stock to decline and/or to be highly volatile. Aspire Capital may ultimately purchase all, some or none of the 383,354 shares of common stock not yet issued but registered in this offering. After it has acquired such shares, it may sell all, some or none of such shares. Therefore, sales to Aspire Capital by us pursuant to the Purchase Agreement also may result in substantial dilution to the interests of other holders of our common stock. However, we have the right to control the timing and amount of any sales of our shares to Aspire Capital and the Purchase Agreement may be terminated by us at any time at our discretion without any penalty or cost to us.

Percentage of Outstanding Shares After Giving Effect to the Purchased Shares Issued to Aspire Capital

In connection with entering into the Purchase Agreement, we authorized the sale to Aspire Capital of up to \$10.0 million of our shares of common stock. Subject to any required approval by our board of directors, we have the right but not the obligation to issue more than the 1,146,040 shares included in this prospectus to Aspire Capital under the Purchase Agreement. In the event we elect to issue more than 1,146,040 shares under the Purchase Agreement, we will be required to file a new registration statement and have it declared effective by the SEC. The number of shares ultimately offered for sale by Aspire Capital in this offering is dependent upon the number of shares purchased by Aspire Capital under the Purchase Agreement. The following table sets forth the number and percentage of outstanding shares to be held by Aspire Capital after giving effect to the sale of shares of common stock issued to Aspire Capital at varying purchase prices:

| Assumed Average Purchase Price | Proceeds from the Sale of Shares to Aspire Capital Under the Purchase Agreement Registered in this Offering | Number of Shares to be Issued in this Offering at the Assumed Average Purchase Price (1) | Percentage of Outstanding Shares After Giving Effect to the Purchased Shares Issued to Aspire Capital (2) |
|---------------------------------------|--|---|--|
| \$0.50 | \$543,020 | 1,086,040 | 21.0% |
| \$2.00 | \$2,172,080 | 1,086,040 | 21.0% |
| \$3.50 | \$3,801,140 | 1,086,040 | 21.0% |
| \$7.00 | \$7,602,280 | 1,086,040 | 21.0% |
| \$10.00 | \$10,000,000 | 1,000,000 | 19.6% |

- (1) Excludes the 60,000 Commitment Shares issued under the Purchase Agreement between the Company and Aspire Capital.
- (2) The denominator is based on 4,799,955 shares outstanding as of September 12, 2016, which includes 762,686 shares previously issued to Aspire Capital pursuant to the Purchase Agreement, and the number of shares set forth in the adjacent column which we would have sold to Aspire Capital at the corresponding assumed purchase price set forth in the adjacent column. The numerator is based on the number of shares which we may issue to Aspire Capital under the Purchase Agreement that are included in this prospectus at the corresponding assumed purchase price set forth in the adjacent column.

USE OF PROCEEDS

This prospectus relates to shares of our common stock that may be offered and sold from time to time by Aspire Capital. We will not receive any proceeds upon the sale of shares by Aspire Capital. However, we may receive proceeds up to \$10.0 million under the Purchase Agreement with Aspire Capital. The proceeds received from the sale of the shares under the Purchase Agreement will be used for working capital and general corporate purposes. This anticipated use of net proceeds from the sale of our common stock to Aspire Capital under the Purchase Agreement represents our intentions based upon our current plans and business conditions.

PRICE RANGE OF COMMON STOCK AND DIVIDEND POLICY

Our common stock is traded on the Nasdaq Capital Market under the symbol LTBR. The last reported sale price of our common stock on September 28, 2016 on the Nasdaq Capital Market was \$1.84 per share. The following table sets forth the high and low sale prices for our common stock for the periods indicated as reported on the Nasdaq Capital Market.

| | High | Low |
|--|----------|----------|
| Year Ended December 31, 2014: | | |
| First Quarter | \$ 18.93 | \$ 7.35 |
| Second Quarter | \$ 14.40 | \$ 9.70 |
| Third Quarter | \$ 17.70 | \$ 11.25 |
| Fourth Quarter | \$ 11.85 | \$ 7.60 |
| Year Ended December 31, 2015: | | |
| First Quarter | \$ 9.20 | \$ 5.15 |
| Second Quarter | \$ 14.60 | \$ 5.45 |
| Third Quarter | \$ 7.05 | \$ 3.75 |
| Fourth Quarter | \$ 6.60 | \$ 3.75 |
| Year Ended December 31, 2016: | | |
| First Quarter | \$ 5.15 | \$ 2.55 |
| Second Quarter | \$ 3.00 | \$ 1.75 |
| Third Quarter (through September 28, 2016) | \$ 3.65 | \$ 1.78 |

As of September 15, 2016, there were approximately 96 holders of record of our common stock.

We have never declared or paid cash dividends. We currently intend to retain and use any future earnings for the development and expansion of our business and do not plan to pay any cash dividends in the foreseeable future. Any future determination to pay dividends will be at the discretion of our board of directors. In addition, any future dividends will be subject to the consent of the holders of a majority of our Series A Preferred Stock, as described below under Description of Capital Stock Preferred Stock.

DILUTION

If you acquire shares of our common stock from Aspire Capital in this offering, your ownership interest will be diluted to the extent of the difference between the public offering price per share and the as adjusted net tangible book value per share after giving effect to this offering. We calculate net tangible book value per share by dividing the net tangible book value, which is tangible assets less total liabilities, by the number of outstanding shares of our common stock. Dilution represents the difference between the portion of the amount per share paid by purchasers of shares in this offering and the as-adjusted net tangible book value per share of our common stock immediately after giving effect to this offering. Our net tangible book value as of June 30, 2016 was approximately \$0.1 million, or \$0.01 per share.

After giving effect to the sale of 1,086,040 shares of common stock (the number of shares registered hereby excluding the 60,000 Commitment Shares) in the aggregate amount of \$2.3 million at an assumed offering price of \$2.10 per share, the last reported sale price of our common stock on the Nasdaq Capital Market on September 9, 2016, and after deducting estimated aggregate offering expenses payable by us, our net tangible book value as of June 30, 2016 would have been approximately \$2.3 million, or \$0.39 per share of common stock. This represents an immediate increase in the net tangible book value of \$0.38 per share to our existing stockholders and an immediate dilution in net tangible book value of \$1.71 per share to investors participating in this offering.

The following table illustrates this per share dilution:

| | | | |
|---|--|----|------|
| Assumed offering price per share | | \$ | 2.10 |
| Net tangible book value per share as of June 30, 2016 | | \$ | 0.01 |
| Increase per share attributable to investors participating in this offering | | \$ | 0.38 |
| As adjusted net tangible book value per share as of June 30, 2016, after giving effect to this offering | | | 0.39 |
| Dilution per share to investors participating shares in this offering | | \$ | 1.71 |

The shares sold in this offering (including the 60,000 Commitment Shares), if any, will be sold from time to time at various prices. An increase of \$1.00 per share in the price at which the shares are sold from the assumed offering price of \$2.10 per share shown in the table above, assuming 1,086,040 shares of common stock (the number of shares registered hereby excluding the 60,000 Commitment Shares) are sold at that price for an aggregate amount of approximately \$3.4 million, would result in an adjusted net tangible book value per share after the offering of \$0.57 per share and would increase the dilution in net tangible book value per share to investors in this offering to \$2.53 per share, after deducting estimated aggregate offering expenses payable by us. A decrease of \$1.00 per share in the price at which the shares are sold from the assumed offering price of \$2.10 per share shown in the table above, assuming 1,086,040 shares of common stock are sold at that price for an aggregate amount of approximately \$1.2 million, would result in an adjusted net tangible book value per share after the offering of \$0.20 per share and would decrease the dilution in net tangible book value per share to investors in this offering to \$0.90 per share, after deducting estimated aggregate offering expenses payable by us. This information is supplied for illustrative purposes only and assumes that the Company receives proceeds equal to offering amount.

The foregoing table and discussion is based on 4,799,906 shares of common stock outstanding as of June 30, 2016 and assumes no exercise of any outstanding options or warrants. To the extent that options or warrants are exercised, there may be further dilution to new investors.

DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock and provisions of our articles of incorporation, bylaws and the Nevada corporations law are summaries and are qualified in their entirety by reference to the articles of incorporation and the bylaws. We have filed copies of these documents with the SEC as exhibits to our registration statement, of which this prospectus forms a part. Pursuant to the Company's Articles of Incorporation, as amended, the Company's authorized capital stock consists of 100,000,000 shares of common stock, par value of \$0.001 per share, and 10,000,000 shares of preferred stock, par value \$0.001 per share, to be designated from time to time by our board.

Common Stock

We are authorized to issue up to 100,000,000 shares of common stock, par value \$0.001 per share. Each outstanding share of common stock entitles the holder thereof to one vote per share on all matters. Our bylaws provide that elections for directors shall be by a plurality of votes. Stockholders do not have preemptive rights to purchase shares in any future issuance of our common stock. Upon our liquidation, dissolution or winding up, and after payment of creditors and preferred stockholders, if any, our assets will be divided pro-rata on a share-for-share basis among the holders of the shares of common stock.

The holders of shares of our common stock are entitled to dividends out of funds legally available when and as declared by our board of directors, subject to the consent of the holders of a majority of our Series A Preferred Stock, as described below under Preferred Stock. Our board of directors has never declared a dividend and does not anticipate declaring a dividend in the foreseeable future. Should we decide in the future to pay dividends, as a holding company, our ability to do so and meet other obligations depends upon the receipt of dividends or other payments from our operating subsidiary and other holdings and investments. In addition, our operating subsidiary, from time to time, may be subject to restrictions on its ability to make distributions to us, including as a result of restrictive covenants in loan agreements, restrictions on the conversion of local currency into U.S. dollars or other hard currency and other regulatory restrictions.

All of the issued and outstanding shares of our common stock are duly authorized, validly issued, fully paid and non-assessable. To the extent that additional shares of our common stock are issued, the relative interests of existing stockholders will be diluted.

As of September 12, 2016, there were 4,799,955 shares of our common stock outstanding.

Preferred Stock

We are authorized to issue up to 10,000,000 shares of preferred stock, par value \$0.001 per share, in one or more classes or series within a class as may be determined by our board of directors, who may establish, from time to time, the number of shares to be included in each class or series, may fix the designation, powers, preferences and rights of the shares of each such class or series and any qualifications, limitations or restrictions thereof. Any preferred stock so issued by the board of directors may rank senior to the common stock with respect to the payment of dividends or amounts upon liquidation, dissolution or winding up of us, or both. Moreover, under certain circumstances, the issuance of preferred stock or the existence of the unissued preferred stock might tend to discourage or render more difficult a merger or other change of control.

On July 29, 2016, the Company filed a Certificate of Designation of Preferences, Rights and Limitations of Non-Voting Series A Convertible Preferred Stock (the Certificate of Designation) with the Secretary of State of the State of Nevada, designating a new series of the Company's preferred stock, the Non-Voting Series A Convertible Preferred Stock, par value \$0.001 per share (the Series A Preferred Stock). The Certificate of Designation authorizes the Company to issue up to 1,020,000 shares of Series A Preferred Stock. Each share of Series A Preferred Stock has a liquidation preference of \$2.7451 per share (the Liquidation Preference).

Dividends on the Series A Preferred Stock are cumulative and accrue quarterly, whether or not declared by the board of directors, at the rate of 7.0% per annum on the sum of the Liquidation Preference plus all unpaid accrued and unpaid dividends thereon, whether or not declared by the board of directors. In addition, if we declare certain dividends on our common stock, we are required to declare and pay a dividend on the outstanding shares of Series A Preferred Stock on a pro rata basis with the common stock, determined on an as-converted basis. In the event of any liquidation, dissolution or winding down of the Company, each holder of outstanding shares of Series A Preferred Stock will be entitled to be paid out of the assets of the Company available for distribution to stockholders, before any payment may be made to the holders of common stock, an amount equal to the Liquidation Preference for such shares plus accrued and unpaid dividends thereon.

Except as otherwise required by law, the holders of the Series A Preferred Stock have no voting rights. In addition, as long as 255,000 shares of Series A Preferred Stock are outstanding, we may not take certain actions without first having obtained the affirmative vote or waiver of the holders of a majority of the outstanding shares of Series A Preferred Stock, including, among other actions, amending or waiving any provision of our articles of incorporation or bylaws, repurchasing or redeeming common stock except from employees, officers, directors, or consultants upon termination of their employment or other relationship or in accordance with any existing repurchase or redemption program that has been approved by our board of directors, declaring or paying any dividend other than a dividend payable solely in stock or other securities of the Company, or entering into any sale, license, lease or other disposition of assets having a book value of at least \$10 million that is effected outside of the ordinary course of the business. Further, as long as 510,000 shares of Series A Preferred Stock are outstanding, we may not effect any event for which the Liquidation Preference would become payable.

Any holder of outstanding shares of Series A Preferred Stock may elect, from time to time, to convert any or all of such holder's shares of Series A Preferred Stock into a number of shares of common stock as is determined by dividing the Liquidation Preference by \$2.7451 (the Conversion Price). In addition, if at any time the trading price of our common stock (i) is greater than two times the Conversion Price before August 2, 2019 or (ii) is greater than three times the Conversion Price, we may cause a mandatory conversion of the Series A Preferred Stock. The Conversion Price is also subject to customary anti-dilution adjustments following stock splits, stock combinations and similar events.

We have the option at any time after August 2, 2019 to redeem some or all of the outstanding Series A Preferred Stock for an amount in cash equal to the Liquidation Preference plus the amount of any accrued but unpaid dividends. The Series A Preferred Stock is not redeemable upon the election of the holders of Series A Preferred Stock. Without the consent of our board of directors, the holders of Series A Preferred Stock may only transfer shares of Series A Preferred Stock to their affiliates or to the Company.

As of September 12, 2016, there were 1,020,000 shares of our Series A Preferred Stock outstanding.

Anti-Takeover Effects of Our Articles of Incorporation and Bylaws

Our articles of incorporation and bylaws contain certain provisions that may have anti-takeover effects, making it more difficult for or preventing a third party from acquiring control of the Company or changing its board of directors and management. According to our articles of incorporation and bylaws, neither the holders of our common stock nor the holders of any preferred stock have cumulative voting rights in the election of our directors. The lack of cumulative voting makes it more difficult for other stockholders to replace our board of directors or for a third party to obtain control of the Company by replacing its board of directors.

Anti-Takeover Effects of Nevada Law

Business Combinations

The business combination provisions of Sections 78.411 to 78.444, inclusive, of the Nevada Revised Statutes, or NRS, generally prohibit a Nevada corporation with at least 200 stockholders from engaging in various combination transactions with any interested stockholder for a period of two years after the date of the transaction in which the person became an interested stockholder, unless the transaction is approved by the board of directors prior to the date the interested stockholder obtained such status or the combination is approved by the board of directors and thereafter is approved at a meeting of the stockholders by the affirmative vote of stockholders representing at least 60% of the outstanding voting power held by disinterested stockholders, and extends beyond the expiration of the two-year period, unless:

the combination was approved by the board of directors prior to the person becoming an interested stockholder or the transaction by which the person first became an interested stockholder was approved by the board of directors before the person became an interested stockholder or the combination is later approved by a majority of the voting power held by disinterested stockholders; or

if the consideration to be paid by the interested stockholder is at least equal to the highest of: (a) the highest price per share paid by the interested stockholder within the two years immediately preceding the date of the announcement of the combination or in the transaction in which it became an interested stockholder, whichever is higher, (b) the market value per share of common stock on the date of announcement of the combination and the date the interested stockholder acquired the shares, whichever is higher, or (c) for holders of preferred stock, the highest liquidation value of the preferred stock, if it is higher.

A combination is generally defined to include mergers or consolidations or any sale, lease exchange, mortgage, pledge, transfer, or other disposition, in one transaction or a series of transactions, with an interested stockholder having: (a) an aggregate market value equal to 5% or more of the aggregate market value of the assets of the corporation, (b) an aggregate market value equal to 5% or more of the aggregate market value of all outstanding shares of the corporation, (c) 10% or more of the earning power or net income of the corporation, and (d) certain other transactions with an interested stockholder or an affiliate or associate of an interested stockholder.

In general, an interested stockholder is a person who, together with affiliates and associates, owns (or within two years, did own) 10% or more of a corporation's voting stock. The statute could prohibit or delay mergers or other takeover or change in control attempts and, accordingly, may discourage attempts to acquire our Company even though such a transaction may offer our stockholders the opportunity to sell their stock at a price above the prevailing market price.

Our articles of incorporation state that we have elected not to be governed by the business combination provisions, therefore such provisions currently do not apply to us.

Control Share Acquisitions

The control share provisions of Sections 78.378 to 78.3793, inclusive, of the NRS apply to issuing corporations that are Nevada corporations with at least 200 stockholders, including at least 100 stockholders of record who are Nevada residents, and that conduct business directly or indirectly in Nevada. The control share statute prohibits an acquirer, under certain circumstances, from voting its shares of a target corporation's stock after crossing certain ownership threshold percentages, unless the acquirer obtains approval of the target corporation's disinterested stockholders. The statute specifies three thresholds: one-fifth or more but less than one-third, one-third but less than a majority, and a majority or more, of the outstanding voting power. Generally, once an acquirer crosses one of the above thresholds, those shares in an offer or acquisition and acquired within 90 days thereof become control shares and such control shares are deprived of the right to vote until disinterested stockholders restore the right. These provisions also provide that if control shares are accorded full voting rights and the acquiring person has acquired a majority or more of all voting power, all other stockholders who do not vote in favor of authorizing voting rights to the control shares are entitled to demand payment for the fair value of their shares in accordance with statutory procedures established for dissenters' rights.

A corporation may elect to not be governed by, or opt out of, the control share provisions by making an election in its articles of incorporation or bylaws, provided that the opt-out election must be in place on the 10th day following the date an acquiring person has acquired a controlling interest, that is, crossing any of the three thresholds described above. We have not opted out of the control share statutes, and will be subject to these statutes if we are an issuing corporation as defined in such statutes.

The effect of the Nevada control share statutes is that the acquiring person, and those acting in association with the acquiring person, will obtain only such voting rights in the control shares as are conferred by a resolution of the stockholders at an annual or special meeting. The Nevada control share law, if applicable, could have the effect of discouraging takeovers of our Company.

Transfer Agent and Registrar

Our independent stock transfer agent is Computershare Trust Company, located at 350 Indiana Street, Golden, Colorado 80401. Their phone number is (303) 262-0600.

SELLING SHAREHOLDER

The selling shareholder may from time to time offer and sell any or all of the shares of our common stock set forth below pursuant to this prospectus. When we refer to the selling shareholder in this prospectus, we mean the entity listed in the table below, and its respective pledgees, donees, permitted transferees, assignees, successors and others who later come to hold any of the selling shareholder's interests in shares of our common stock other than through a public sale.

The following table sets forth, as of the date of this prospectus, the name of the selling shareholder for whom we are registering shares for sale to the public, the number of shares of common stock beneficially owned by the selling shareholder prior to this offering, the total number of shares of common stock that the selling shareholder may offer pursuant to this prospectus and the number of shares of common stock that the selling shareholder will beneficially own after this offering. Except as noted below, the selling shareholder does not have, or within the past three years has not had, any material relationship with us or any of our predecessors or affiliates and the selling shareholder is not or was not affiliated with registered broker-dealers.

Based on the information provided to us by the selling shareholder, assuming that the selling shareholder sells all of the shares of our common stock beneficially owned by it that have been registered by us and does not acquire any additional shares during the offering, the selling shareholder will not own any shares other than those appearing in the column entitled Shares Beneficially Owned After Offering. We cannot advise you as to whether the selling shareholder will in fact sell any or all of such shares of common stock. In addition, the selling shareholder may have sold, transferred or otherwise disposed of, or may sell, transfer or otherwise dispose of, at any time and from time to time, the shares of our common stock in transactions exempt from the registration requirements of the Securities Act after the date on which it provided the information set forth in the table below.

| Name | Shares Beneficially Owned Prior to Offering | | Number of Shares Being Offered | Shares Beneficially Owned After Offering(1) | |
|-----------------------------|---|------|--------------------------------|---|----|
| | Number | % | | Number | % |
| Aspire Capital Fund, LLC(2) | 80,193(3) | 1.7% | 1,146,040 | 20,193 | *% |

* Less than 1%.

- (1) Assumes the sale of all shares of common stock registered pursuant to this prospectus, although the selling shareholder is under no obligation known to us to sell any shares of common stock at this time.
- (2) Aspire Capital Partners LLC (Aspire Partners) is the Managing Member of Aspire Capital Fund LLC (Aspire Capital). SGM Holdings Corp (SGM) is the Managing Member of Aspire Partners. Mr. Steven G. Martin is the president and sole shareholder of SGM, as well as a principal of Aspire Partners. Mr. Erik J. Brown is the president and sole shareholder of Red Cedar Capital Corp (Red Cedar), which is a principal of Aspire Partners. Mr. Christos Komissopoulos is president and sole shareholder of Chrisko Investors Inc. (Chrisko), which is a principal of Aspire Partners. Each of Aspire Partners, SGM, Red Cedar, Chrisko, Mr. Martin, Mr. Brown, and Mr. Komissopoulos may be deemed to be a beneficial owner of common stock held by Aspire Capital. Each of Aspire Partners, SGM, Red Cedar, Chrisko, Mr. Martin, Mr. Brown, and Mr. Komissopoulos disclaims beneficial ownership of the common stock held by Aspire Capital. Aspire Capital is not a licensed broker dealer nor is any of its affiliate a licensed broker dealer.
- (3) As of January 8, 2016, Aspire Capital beneficially owned 80,193 shares of our common stock, including 20,193 shares that Aspire Capital purchased in the open market and 60,000 shares acquired under the Purchase Agreement, consisting of the shares we issued to Aspire Capital as a commitment fee. We may elect in our sole discretion to sell to Aspire Capital up to an additional 383,354 shares under the Purchase Agreement and included in this prospectus but Aspire Capital does not presently beneficially own those shares as determined in accordance with the rules of the SEC.

PLAN OF DISTRIBUTION

The common stock offered by this prospectus is being offered by Aspire Capital, the selling shareholder. The common stock may be sold or distributed from time to time by the selling shareholder directly to one or more purchasers or through brokers, dealers, or underwriters who may act solely as agents at market prices prevailing at the time of sale, at prices related to the prevailing market prices, at negotiated prices, or at fixed prices, which may be changed. The sale of the common stock offered by this prospectus may be effected in one or more of the following methods:

ordinary brokers transactions;

transactions involving cross or block trades;

through brokers, dealers, or underwriters who may act solely as agents;

at the market into an existing market for the common stock;

in other ways not involving market makers or established business markets, including direct sales to purchasers or sales effected through agents;

in privately negotiated transactions; or

any combination of the foregoing.

In order to comply with the securities laws of certain states, if applicable, the shares may be sold only through registered or licensed brokers or dealers. In addition, in certain states, the shares may not be sold unless they have been registered or qualified for sale in the state or an exemption from the registration or qualification requirement is available and complied with.

The selling shareholder may also sell shares of common stock under Rule 144 promulgated under the Securities Act, if available, rather than under this prospectus. In addition, the selling shareholder may transfer the shares of common stock by other means not described in this prospectus.

Brokers, dealers, underwriters, or agents participating in the distribution of the shares as agents may receive compensation in the form of commissions, discounts, or concessions from the selling shareholder and/or purchasers of the common stock for whom the broker-dealers may act as agent. Aspire Capital has informed us that each such broker-dealer will receive commissions from Aspire Capital which will not exceed customary brokerage commissions.

Aspire Capital is an underwriter within the meaning of the Securities Act.

Neither we nor Aspire Capital can presently estimate the amount of compensation that any agent will receive. We know of no existing arrangements between Aspire Capital, any other shareholder, broker, dealer, underwriter, or agent relating to the sale or distribution of the shares offered by this prospectus. At the time a particular offer of shares is made, a prospectus supplement, if required, will be distributed that will set forth the names of any agents, underwriters, or dealers and any compensation from the selling shareholder, and any other required information. Pursuant to a requirement of the Financial Industry Regulatory Authority, or FINRA, the maximum commission or discount and other compensation to be received by any FINRA member or independent broker-dealer shall not be greater than eight percent (8%) of the gross proceeds received by us for the sale of any securities being registered pursuant to Rule 415 under the Securities Act.

We will pay all of the expenses incident to the registration, offering, and sale of the shares to the public other than commissions or discounts of underwriters, broker-dealers, or agents. We have agreed to indemnify Aspire Capital and certain other persons against certain liabilities in connection with the offering of shares of common stock offered hereby, including liabilities arising under the Securities Act or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities. Aspire Capital has agreed to indemnify us against liabilities under the Securities Act that may arise from certain written information furnished to us by Aspire Capital specifically for use in this prospectus or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers, and controlling persons, we have been advised that in the opinion of the SEC this indemnification is against public policy as expressed in the Securities Act and is therefore, unenforceable.

Aspire Capital and its affiliates have agreed not to engage in any direct or indirect short selling or hedging of our common stock during the term of the Purchase Agreement.

We have advised Aspire Capital that while it is engaged in a distribution of the shares included in this prospectus it is required to comply with Regulation M promulgated under the Securities Exchange Act of 1934, as amended. With certain exceptions, Regulation M precludes the selling shareholder, any affiliated purchasers, and any broker-dealer or other person who participates in the distribution from bidding for or purchasing, or attempting to induce any person to bid for or purchase any security which is the subject of the distribution until the entire distribution is complete. Regulation M also prohibits any bids or purchases made in order to stabilize the price of a security in connection with the distribution of that security. All of the foregoing may affect the marketability of the shares offered hereby.

We may suspend the sale of shares by Aspire Capital pursuant to this prospectus for certain periods of time for certain reasons, including if the prospectus is required to be supplemented or amended to include additional material information.

This offering will terminate on the date that all shares offered by this prospectus have been sold by Aspire Capital.

LEGAL MATTERS

Gary R. Henrie, Las Vegas, Nevada, has passed upon the validity of the common stock offered hereby.

EXPERTS

The consolidated financial statements as of December 31, 2015 and for the year then ended incorporated by reference in this prospectus have been so incorporated in reliance on the report of BDO USA, LLP, an independent registered public accounting firm (the report on the consolidated financial statements contains an explanatory paragraph regarding the Company's ability to continue as a going concern) incorporated herein by reference, given on the authority of said firm as experts in auditing and accounting.

The consolidated financial statements of the Company for the year ended December 31, 2014 incorporated in this prospectus by reference have been audited by Anderson Bradshaw PLLC, an independent registered public accounting firm, and are incorporated in reliance upon their report dated March 25, 2015 (except for the effects of the matters described in Note 2, Note 9, Note 12, Note 14, and Note 15 of the Notes to the Company's consolidated financial statements, as to which their report is dated November 23, 2015), given upon such firm's authority as experts in auditing and accounting.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We are subject to the reporting requirements of the Exchange Act and file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy these reports, proxy statements and other information at the SEC's public reference facilities at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference facilities. SEC filings are also available at the SEC's website at www.sec.gov.

This prospectus forms part of a registration statement on Form S-1 filed by us with the SEC under the Securities Act. As permitted by the SEC, this prospectus does not contain all the information in the registration statement filed with the SEC. For a more complete understanding of this offering, you should refer to the complete registration statement, including the exhibits thereto, on Form S-1 and the amendments thereto that may be obtained as described above. Statements contained or incorporated by reference in this prospectus or any prospectus supplement about the contents of any contract or other document are not necessarily complete. If we have filed any contract or other document as an exhibit to the registration statement or any other document incorporated by reference in the registration statement of which this prospectus forms a part, you should read the exhibit for a more complete understanding of the document or matter involved. Each statement regarding a contract or other document is qualified in its entirety by reference to the actual document.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference in this prospectus certain of the information we file with the SEC. This means we can disclose important information to you by referring you to another document that has been filed separately with the SEC. The information incorporated by reference is considered to be a part of this prospectus, and information that we file later with the SEC will automatically update and supersede information contained in this prospectus and any accompanying prospectus supplement. We incorporate by reference the documents listed below that we have previously filed with the SEC, except we are not incorporating by reference any information furnished (but not filed) under Item 2.02 or Item 7.01 of any Current Report on Form 8-K and corresponding information furnished under Item 9.01 as an exhibit thereto:

our Annual Report on Form 10-K for the fiscal year ended December 31, 2015, filed on March 15, 2016, including portions of our Proxy Statement on Schedule 14A filed on April 5, 2016 to the extent specifically incorporated by reference therein;

our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2016 and June 30, 2016, filed on May 5, 2016 and August 11, 2016, respectively;

our Current Reports on Form 8-K filed on January 20, 2016, February 29, 2016, May 13, 2016, June 3, 2016, June 10, 2016, June 29, 2016 (two), July 5, 2016, July 7, 2016, July 20, 2016, August 2, 2016, August 3, 2016 and August 29, 2016 (except that any portions thereof which are furnished and not filed shall not be deemed incorporated); and

the description of our common stock contained in our Registration Statement on Form 8-A filed on July 18, 2006, including any amendments or reports filed for the purpose of updating such description.

We also incorporate by reference into this prospectus additional documents that we may file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the completion or termination of the offering of the securities described in this prospectus, including all such documents we may file with the SEC after the date of the initial registration statement and prior to the effectiveness of the registration statement, but excluding any information deemed furnished and not filed with the SEC. Any statements contained in a previously filed document incorporated by reference into this prospectus is deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus modifies or supersedes that statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

We will provide a copy of any or all of the documents incorporated herein by reference upon written or oral request from any person, including any beneficial owner, to whom a prospectus is delivered. These documents will be provided to you at no cost by contacting: Lightbridge Corporation, 11710 Plaza America Drive, Suite 2000, Reston, Virginia 20190; telephone number: (571) 730-1200. You may also access the documents incorporated by reference in this prospectus through our website at www.ltbridge.com. Except for the specific incorporated documents listed above, no information available on or through our website shall be deemed to be incorporated in this prospectus or the registration statement of which it forms a part.

1,146,040 Shares

Common Stock

PROSPECTUS

, 2016

PART II INFORMATION NOT REQUIRED IN PROSPECTUS**Item 13. Other Expenses of Issuance and Distribution**

The following table sets forth the costs and expenses payable by the Company in connection with the registration and sale of the common stock being registered. All the amounts shown are estimates except the SEC registration fee.

| | | |
|---------------------------------|----|--------|
| SEC registration fee | \$ | 560 |
| Printing expense | | 5,000 |
| Legal fees and expenses | | 30,000 |
| Accounting fees and expenses | | 5,000 |
| Transfer agent fees | | 2,000 |
| Miscellaneous fees and expenses | | 2,440 |
| Total Expenses | \$ | 45,000 |

Item 14. Indemnification of Directors and Officers

We are a Nevada corporation and generally governed by the Nevada Private Corporations Code, Title 78 of the Nevada Revised Statutes, or NRS.

Section 78.138 of the NRS provides that, unless the corporation's articles of incorporation provide otherwise, a director or officer will not be individually liable unless it is proven that (i) the director's or officer's acts or omissions constituted a breach of his or her fiduciary duties, and (ii) such breach involved intentional misconduct, fraud or a knowing violation of the law.

Section 78.7502 of the NRS permits a Nevada corporation to indemnify its directors and officers against expenses, judgments, fines, and amounts paid in settlement actually and reasonably incurred in connection with a threatened, pending, or completed action, suit, or proceeding, except an action by or on behalf of the corporation, if the officer or director (i) is not liable pursuant to NRS 78.138, or (ii) acted in good faith and in a manner the officer or director reasonably believed to be in or not opposed to the best interests of the corporation and, if a criminal action or proceeding, had no reasonable cause to believe the conduct of the officer or director was unlawful. Section 78.7502 of the NRS also requires a corporation to indemnify its officers and directors if they have been successful on the merits or otherwise in defense of any claim, issue, or matter resulting from their service as a director or officer.

Section 78.751 of the NRS permits a Nevada corporation to indemnify its officers and directors against expenses incurred by them in defending a civil or criminal action, suit, or proceeding as they are incurred and in advance of final disposition thereof, upon determination by the stockholders, the disinterested board members, or by independent legal counsel. Section 78.751 of NRS requires a corporation to advance expenses as incurred upon receipt of an undertaking by or on behalf of the officer or director to repay the amount if it is ultimately determined by a court of competent jurisdiction that such officer or director is not entitled to be indemnified by the corporation if so provided in the corporation's articles of incorporation, bylaws, or other agreement. Section 78.751 of the NRS further permits the corporation to grant its directors and officers additional rights of indemnification under its articles of incorporation, bylaws or other agreement.

Section 78.752 of the NRS provides that a Nevada corporation may purchase and maintain insurance or make other financial arrangements on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another company, partnership, joint venture, trust or other enterprise, for any liability asserted against him and liability and expenses incurred by him in his capacity as a director, officer, employee or agent, or arising out of his status as such, whether or not the corporation has the authority to indemnify him against such liability and expenses.

Our Articles of Incorporation and Bylaws implement the indemnification and insurance provisions permitted by Chapter 78 of the NRS by providing that:

We shall indemnify our directors and officers to the fullest extent permitted by the NRS against expense, liability and loss reasonably incurred or suffered by them in connection with their service as an officer or director; and

We may purchase and maintain insurance, or make other financial arrangements, on behalf of any person who holds or who has held a position as a director, officer, or representative against liability, cost, payment, or expense incurred by such person.

At the present time, there is no pending litigation or proceeding involving a director, officer, employee or other agent of ours in which indemnification would be required or permitted. We are not aware of any threatened litigation or proceeding which may result in a claim for such indemnification.

Item 15. Recent Sales of Unregistered Securities

Option Agreement

On August 10, 2016, the Company entered into an Option Agreement with Aspire Capital Fund, LLC, or Aspire Capital, pursuant to which Aspire Capital granted the Company the right at any time or times prior to December 31, 2019 to require Aspire Capital to enter into up to two common stock purchase agreements, each having a term of up to 36 months and collectively requiring Aspire Capital to purchase up to \$20 million in the aggregate of the Company's common stock (or such lesser amount as the Company may determine) on an ongoing basis when required by the Company. The Company issued warrants to purchase 500,000 shares of its common stock to Aspire Capital, in lieu of commitment shares, as consideration for Aspire Capital entering into the Option Agreement.

The issuance of the warrants under the Option Agreement and the shares of common stock underlying the warrants is exempt from registration under the Securities Act of 1933, as amended (the Securities Act), pursuant to the exemption for transactions by an issuer not involving any public offering under Section 4(a)(2) of the Securities Act.

Issuance of Preferred Stock

On August 2, 2016, the Company sold 1,020,000 shares of its newly created Non-Voting Series A Convertible Preferred Stock (the Series A Preferred Stock) to General International Holdings, Inc. (GIH) for approximately \$2.8 million, or approximately \$2.75 per share, pursuant to a securities purchase agreement dated June 28, 2016. The Series A Preferred Stock is non-voting and is convertible at the option of the holder into shares of the Company's common stock initially on a one-for-one basis. Dividends accrue on the Series A Preferred Stock at the rate of 7% per year and will be paid in-kind. The Company expects to use the proceeds from offering for general corporate purposes, including but not limited to research and development.

The issuance of the Series A Preferred Stock and the shares of common stock underlying the Series A Preferred Stock is exempt from registration under the Securities Act, pursuant to the exemption for transactions by an issuer not involving any public offering under Section 4(a)(2) of the Securities Act.

Aspire Capital Transaction

On September 4, 2015, the Company entered into a Common Stock Purchase Agreement, or the Purchase Agreement, with Aspire Capital, which provides that, upon the terms and subject to the conditions and limitations set forth therein, Aspire Capital is committed to purchase up to an aggregate of \$10.0 million of shares of the Company's common stock (the Purchase Shares) over the 24-month term of the Purchase Agreement.

Upon execution of the Purchase Agreement, the Company issued 60,000 shares of its common stock to Aspire Capital in consideration for entering into the Purchase Agreement. The Purchase Shares may be sold by the Company to Aspire Capital on any business day the Company selects in two ways: (1) through a regular purchase of up to 100,000 shares at a known price based on the market price of our common stock prior to the time of each sale, and (2) through a VWAP purchase of a number of shares up to 30% of the volume traded on the purchase date at a price equal to the lesser of the closing sale price or 95% of the volume weighted average price for such purchase date.

The issuance of the 60,000 Commitment Shares and all other shares of common stock that may be issued from time to time to Aspire Capital under the Purchase Agreement is exempt from registration under the Securities Act, pursuant to the exemption for transactions by an issuer not involving any public offering under Section 4(a)(2) of the Securities Act.

Item 16. Exhibits and Financial Statement Schedules

The list of exhibits in the Exhibit Index to this registration statement is incorporated herein by reference.

Item 17. Undertakings

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(a) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(b) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the Calculation of Registration Fee table in the effective registration statement; and

(c) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of this offering.

(4) That, for the purpose of determining liability under the Securities Act to any purchaser: each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness; provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(5) That, for purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Reston, Commonwealth of Virginia, on September 29, 2016.

Lightbridge Corporation

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

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

| Signature | Title | Date |
|------------------------------------|--|--------------------|
| /s/ Seth Grae Seth Grae | President, Chief Executive Officer and Director (Principal Executive Officer) | September 29, 2016 |
| /s/ Linda Zwobota Linda Zwobota | Chief Financial Officer (Principal Financial and Accounting Officer) | September 29, 2016 |
| * Thomas Graham, Jr. | Chairman and Director | September 29, 2016 |
| Xingping Hou | Co-Chairman and Director | |
| * Victor E. Alessi | Director | September 29, 2016 |
| * Kathleen Kennedy Townsend | Director | September 29, 2016 |
| * Daniel B. Magraw | Director | September 29, 2016 |

*By: /s/ Seth Grae
Seth Grae
Attorney-in-Fact

EXHIBIT INDEX

| Exhibit No. | Description |
|--------------------|--|
| 3.1 | Articles of Incorporation of the Company, as amended through September 21, 2009 (incorporated by reference to Exhibit 3.1 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2015 filed on March 15, 2016). |
| 3.2 | Certificate of Change (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on July 20, 2016). |
| 3.3 | Certificate of Designation of Non-Voting Series A Convertible Preferred Stock of the Company (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on August 3, 2016). |
| 3.4 | Amended and Restated Bylaws of the Company (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on August 29, 2016). |
| 4.1 | Registration Rights Agreement, dated September 4, 2015, between the Company and Aspire Capital Fund, LLC (incorporated by reference to Exhibit 4.1 the Company's Current Report on Form 8-K filed on September 8, 2015). |
| 4.2 | Form of Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.1 to the current report on Form 8-K filed by the Company on July 23, 2010). |
| 4.3 | Form of Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.1 to the current report on Form 8-K filed by the Company on October 22, 2013). |
| 4.4 | Form of Common Stock Purchase Warrant, as revised June 30, 2016 (incorporated by reference to Exhibit 4.1 to the Company's Form 8-K filed on July 7, 2016). |
| 4.5 | Form of Pre-Funded Warrant (incorporated by reference to Exhibit 4.1 to the Company's Form 8-K filed on June 29, 2016). |
| 4.6 | Form of Commitment Warrant (incorporated by reference to Exhibit 4.3 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2016 filed on August 11, 2016). |
| 4.7 | Specimen Certificate for the Company's Common Stock (incorporated by reference to Exhibit 4.1 to the Company's registration statement on Form S-3 filed on April 1, 2013, File No. 333-187659). |
| 5.1** | Opinion of Gary R. Henrie, Esq. |
| 10.1 | Common Stock Purchase Agreement, dated September 4, 2015, between the Company and Aspire Capital Fund, LLC (incorporated by reference to the Company's Current Report on Form 8-K filed on September 8, 2015). |
| 10.2 | At-the-Market Issuance Sales Agreement, dated June 11, 2015, by and between Lightbridge Corporation and MLV & Co. LLC (incorporated by reference to Exhibit 1.2 to the Company's registration statement on Form S-3 filed on June 11, 2015, File No. 333- 204889). |
| 10.3 | Securities Purchase Agreement, dated June 28, 2016, between the Company and Aspire Capital Fund, LLC (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on June 29, 2016). |
| 10.4 | Securities Purchase Agreement, dated June 28, 2016, between the Company and General International Holdings, Inc. (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on June 29, 2016). |

| Exhibit No. | Description |
|-------------|---|
| 10.5 | Option Agreement, dated August 10, 2016, between the Company and Aspire Capital Fund, LLC (incorporated by reference to Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2016 filed on August 11, 2016). |
| 10.6 | 2006 Stock Plan (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on February 21, 2006). |
| 10.7 | Lightbridge Corporation 2015 Equity Incentive Plan, as amended (incorporated by reference to Appendix A to the Company's Definitive Proxy Statement filed on April 4, 2016). |
| 10.8 | Employment Agreement, dated as of February 14, 2006, between the Company and Seth Grae (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on February 21, 2006). |
| 10.9 | Restricted Stock Grant Agreement, dated July 14, 2009, between Seth Grae and the Company (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed on July 20, 2009). |
| 10.10 | Stock Option Agreement, dated July 14, 2009, between Seth Grae and the Company (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed on July 20, 2009). |
| 10.11 | Employment Agreement, dated July 27, 2006, between the Company and Andrey Mushakov (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K filed on August 4, 2006). |
| 10.12 | Independent Director Contract, dated August 21, 2006, between the Company and Victor Alessi (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on August 25, 2006). |
| 10.13 | Independent Director Contract, dated October 10, 2013, between the Company and Kathleen Kennedy Townsend (incorporated by reference to Exhibit 10.5 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2013 filed on March 27, 2014). |
| 10.14 | Independent Director Contract, dated October 23, 2006, between the Company and Daniel B. Magraw (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K, filed on October 23, 2006). |
| 10.15# | Agreement No. EDC10017, dated January 1, 2010, between Emirates Nuclear Energy Corporation and the Company (incorporated by reference to Exhibit 10.13 to the Company's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2014 filed on November 23, 2015). |
| 10.16 | Change Order No. 4 to Agreement No. EDC10017 (incorporated by reference to Exhibit 10.14 to the Company's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2014 filed on November 23, 2015). |
| 10.17 | Change Order No. 5 to Agreement No. EDC10017 (incorporated by reference to Exhibit 10.15 to the Company's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2014 filed on November 23, 2015). |
| 10.18 | Change Order No. 6 to Agreement No. EDC10017 (incorporated by reference to Exhibit 10.16 to the Company's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2014 filed on November 23, 2015). |
| 10.19 | Change Order No. 7 to Agreement No. EDC10017 (incorporated by reference to Exhibit 10.17 to the Company's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2014 filed on November 23, 2015). |

| Exhibit No. | Description |
|--------------------|--|
| 10.20# | Consultancy Services Agreement, dated November 1, 2013, between Emirates Nuclear Energy Corporation and the Company (incorporated by reference to Exhibit 10.18 to the Company's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2014 filed on November 23, 2015). |
| 10.21# | Change Order No. 1 to Consultancy Services Agreement (incorporated by reference to Exhibit 10.19 to the Company's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2014 filed on November 23, 2015). |
| 10.22 | Change Order No. 2 to Consultancy Services Agreement (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q/A for the quarterly period ended March 31, 2015 filed on November 23, 2015). |
| 10.23# | Consultancy Agreement, dated July 15, 2012, between the Federal Authority for Nuclear Regulation (UAE) and the Company (incorporated by reference to Exhibit 10.20 to the Company's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2014 filed on November 23, 2015). |
| 10.24# | Amendment No. 1 to Consultancy Agreement, dated January 1, 2013, between the Federal Authority for Nuclear Regulation (UAE) and the Company (incorporated by reference to Exhibit 10.21 to the Company's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2014 filed on November 23, 2015). |
| 10.25# | Amendment No. 2 to Consultancy Agreement, dated January 1, 2014, between the Federal Authority for Nuclear Regulation (UAE) and the Company (incorporated by reference to Exhibit 10.22 to the Company's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2014 filed on November 23, 2015). |
| 10.26# | Amendment No. 3 to Consultancy Agreement, dated November 10, 2014, between the Federal Authority for Nuclear Regulation (UAE) and the Company (incorporated by reference to Exhibit 10.23 to the Company's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2014 filed on November 23, 2015). |
| 10.27# | Consultancy Agreement, dated June 1, 2014, among the Federal Authority for Nuclear Regulation (UAE), Lloyd's Register EMEA and the Company (incorporated by reference to Exhibit 10.24 to the Company's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2014 filed on November 23, 2015). |
| 10.28# | Relationship Deed, dated June 22, 2014, between Lloyd's Register EMEA and the Company (incorporated by reference to Exhibit 10.25 to the Company's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2014 filed on November 23, 2015). |
| 10.29 | Strategic Alliance Agreement, dated August 16, 2012, between Lloyd's Register EMEA and the Company (incorporated by reference to Exhibit 10.26 to the Company's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2014 filed on November 23, 2015). |
| 10.30# | Subcontracted Services Agreement Order Form, dated October 12, 2013, between Lloyd's Register Asia and the Company (incorporated by reference to Exhibit 10.27 to the Company's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2014 filed on November 23, 2015). |
| 21.1 | List of Subsidiaries (incorporated by reference to Exhibit 21.1 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2015 filed on March 15, 2016). |
| 23.1** | Consent of Gary R. Henrie, Esq. (included in Exhibit 5.1). |
| 23.2* | Consent of BDO USA, LLP |

| Exhibit No. | Description |
|--------------------|------------------------------------|
| 23.3* | Consent of Anderson Bradshaw PLLC. |
| 24** | Power of Attorney. |

* Previously filed with Post-Effective Amendment No. 1 to Form S-1 filed on September 16, 2016.

** Previously filed with the Form S-1 filed on October 19, 2015.

Confidential treatment was granted for certain portions of this exhibit pursuant to an application for confidential treatment filed with the Securities and Exchange Commission on November 23, 2015. Such portions have been filed separately with the Commission.

II-9
