

SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM 10-K/A

(Amendment No. 1)

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

For the fiscal year ended: December 31, 2008

OR

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

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

Commission File Number: 000-28543

**LIGHTBRIDGE CORPORATION**  
(Exact name of registrant as specified in its charter)

**Nevada**  
(State or other jurisdiction of  
incorporation or organization)

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

1600 Tyson's Boulevard, Suite 550  
McLean, Virginia 22102  
(Address of principal executive office and zip code)

(571) 730-1200  
(Registrant's telephone number, including area code)

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Securities registered pursuant to Section 12(b) of the Act: **None**

Securities registered pursuant to Section 12(g) of the Act: **Common Stock, par value \$ .001**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes  No

As of June 30, 2008, the aggregate market value of the shares of the Registrant's common stock held by non-affiliates (based upon the closing price of such shares as reported on the Over-the-Counter Bulletin Board) was approximately \$67.9 million. Shares of the Registrant's common stock held by each executive officer and director have been excluded in that such persons may be deemed to be affiliates of the Registrant. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of March 23, 2009 there were 301,841,722 shares of the Registrant's common stock outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE:**

Portions of the Registrant's Definitive Proxy Statement for its 2009 Annual Meeting of Shareholders to be filed with the Commission within 120 days after the close of the Registrant's fiscal year are incorporated by reference into Part III of this Annual Report on Form 10-K.

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#### EXPLANATORY NOTE

This Amendment No. 1 on Form 10-K/A (this "Amendment") amends the Lightbridge Corporation (the "Company") Annual Report on Form 10-K for the year ended December 31, 2008, previously filed with the Securities and Exchange Commission on March 26, 2009 (the "Original Filing"). This Amendment is being filed solely to include revised certifications of the Principal Executive Officer and the Principal Financial and Accounting Officer, required pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. Each certification, as corrected by this Amendment, was true and correct as of the date of the Original Filing.

No modification or update is otherwise made to any other disclosures in the Original Filing, nor does this Amendment reflect any events occurring after the date of the Original Filing.

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**PART IV**

**Item 15. Exhibits and Financial Statement Schedules.**

The following exhibits are filed with this report, except those indicated as having previously been filed with the Securities and Exchange Commission and are incorporated by reference to another report, registration statement or form. As to any shareholder of record requesting a copy of this report, we will furnish any exhibit indicated in the list below as filed with this report upon payment to us of our expenses in furnishing the information.

| <i><b>Exhibit<br/>Number</b></i> | <i><b>Description</b></i>  |
|----------------------------------|--|
| 3.1                              | Articles of Incorporation (incorporated by reference from the Company's Quarterly Report on Form 10-Q filed on November 12, 2009).   |
| 3.2                              | By-laws (incorporated by reference from the Company's Current Report on Form 8-K filed on September 18, 2006).   |
| 4.1                              | 2005 Compensation Plan for Outside Consultants of Custom Brand Networks, Inc. dated March 1, 2005 (incorporated by reference from the Company's Registration Statement on Form S-8 filed on March 10, 2005).   |
| 4.2                              | 2005 Augmented Compensation Plan for Outside Consultants of the Company dated August 15, 2005 (incorporated by reference from the Company's Registration Statement on Form S-8 filed on August 19, 2005).  |
| 4.3                              | 2006 Stock Plan (incorporated by reference to Exhibit 10.1 of the current report of the Company on Form 8-K filed February 21, 2006)   |
| 10.1                             | Employment Agreement, dated as of February 14, 2006, between the Company and Seth Grae (incorporated by reference to Exhibit 10.2 of the current report of the Company on Form 8-K filed February 21, 2006)  |
| 10.2                             | Teaming Agreement dated February 22, 2006 between The University of Texas System, The University of Texas of the Permian Basin, The University of Texas at Austin, The University of Texas at Arlington, The University of Texas at Dallas, The University of Texas at El Paso, The City of Andrews, Texas, Andrews County, Texas, the Midland Development Corporation, the Odessa Development Corporation, Thorium Power and General Atomics (incorporated by reference from Exhibit 10. the Company's Registration Statement on Form S-4 filed June 14, 2006). |
| 10.3                             | Employment Agreement, dated July 27, 2006, between the Company and Andrey Mushakov (incorporated by reference to Exhibit 10.1 of the current report of the Company on Form 8-K filed August 4, 2006).  |
| 10.4                             | Independent Director Contract, dated August 21, 2006, between the Company and Victor Alessi (incorporated by reference to Exhibit 10.1 of the current report of the Company on Form 8-K filed August 25, 2006).  |
| 10.5                             | Independent Director's Contract, dated October 23, 2006, between Thorium Power, Ltd. and Jack D. Ladd (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed on October 23, 2006).  |
| 10.6                             | Independent Director's Contract, dated October 23, 2006, between Thorium Power, Ltd. 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).  |
| 10.7                             | Employment Agreement, dated February 1, 2007, between the Company and Erik Hallstrom (incorporated by reference to Exhibit 10.1 of the current report of the Company on Form 8-K filed February 1, 2007).  |
| 10.8                             | Employment Agreement, dated February 1, 2007, between James Guerra and Thorium Power, Ltd. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed on October 23, 2007)  |
| 10.9                             | Agreement for Ampoule Irradiation Testing in 2006-2007, dated December 28, 2007, between Thorium Power, Inc. and Russian Research Centre Kurchatov Institute (incorporated by reference to Exhibit 10.9 to the Company's Annual Report on Form 10-K, filed on March 26, 2009).   |
| 14.1                             | Code of Ethics (incorporated by reference from the Company's Annual Report on Form 10-KSB filed on November 25, 2005).   |
| 31.1*                            | Rule 13a-14(a)/15d-14(a) Certification - Principal Executive Officer   |
| 31.2*                            | Rule 13a-14(a)/15d-14(a) Certification - Principal Accounting Officer  |
| 32*                              | Section 1350 Certifications  |

\* Filed herewith

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SIGNATURES

In accordance with section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant caused this Report on Form 10-K to be signed on its behalf by the undersigned, thereto duly authorized individual.

Date: November 19, 2009

LIGHTBRIDGE CORPORATION

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

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated on November 19, 2009.

| SIGNATURE   | TITLE   |
|---|---|
| <u>/s/ Seth Grae</u><br>Seth Grae                   | Chief Executive Officer, President and Director<br>(Principal Executive Officer)      |
| <u>/s/ James Guerra</u><br>James Guerra             | Chief Financial Officer and Treasurer<br>(Principal Accounting and Financial Officer) |
| <u>/s/ Thomas Graham, Jr.</u><br>Thomas Graham, Jr. | Director  |
| <u>/s/ Victor Alessi</u><br>Victor Alessi           | Director  |
| <u>/s/ Jack Ladd</u><br>Jack Ladd                   | Director  |
| <u>/s/ Dan Magraw</u><br>Dan Magraw                 | Director  |

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EXHIBIT INDEX

| <i>Exhibit<br/>Number</i> | <i>Description</i>  |
|---------------------------|---|
| 31.1*                     | Rule 13a-14(a)/15d-14(a) Certification - Principal Executive Officer  |
| 31.2*                     | Rule 13a-14(a)/15d-14(a) Certification - Principal Accounting Officer |
| 32*                       | Section 1350 Certifications   |

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I, Seth Grae, certify that:

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

Date: November 19, 2009

/s/ Seth Grae

Seth Grae, Principal Executive Officer

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I, James Guerra, certify that:

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

Date: November 19, 2009

/s/ James Guerra

James Guerra, Principal Financial Officer

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

The undersigned is the Chief Executive Officer and Treasurer or Principal Accounting Officer of Lightbridge Corporation. This Certification is made pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. This Certification accompanies the Annual Report on Form 10-K of Lightbridge Corporation for the year ended December 31, 2008.

The undersigned certifies that such 10-K Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that the information contained in such 10-K Report fairly presents, in all material respects, the financial condition and results of operations of Lightbridge Corporation as of December 31, 2008.

This Certification is executed as of November 19, 2009.

*By: /s/ Seth Grae*

\_\_\_\_\_  
*Name: Seth Grae*

*Title: President, Chief Executive Officer and Director  
(Principal Executive Officer)*

*By: /s/ James Guerra*

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*Name: James Guerra*

*Title: Chief Financial Officer  
(Principal Financial Officer)*

A signed original of this written statement required by Section 906 has been provided to Lightbridge Corporation and will be retained by Lightbridge Corporation and furnished to the Securities and Exchange Commission or its staff upon request.

The forgoing certification is being furnished to the Securities and Exchange Commission pursuant to § 18 U.S.C. Section 1350. It is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

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