SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

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

DATE OF REPORT (DATE OF EARLIEST EVENT REPORTED): September 16, 2012

TGC INDUSTRIES, INC.

(Exact name of registrant as specified in its charter)

Texas (State of incorporation)

001-32472 (Commission File No.)

74-2095844 (IRS Employer Identification No.)

101 E. Park Blvd., Suite 955 Plano, TX 75074

(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: (972) 881-1099

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (*see* General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- o Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- o Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 1.01 — Entry into a Material Definitive Agreement

Amendment to Credit Facility

On September 16, 2012, TGC Industries, Inc. ("TGC" or the "Company") entered into an amendment to the Amended and Restated Loan and Security Agreement (the "Amended Loan Agreement) for the purpose of renewing and extending the Company's line of credit portion of the Amended Loan Agreement with its lender, Sovereign Bank, a Texas state bank. The line of credit portion of the Amended Loan Agreement allows TGC to borrow, repay, and re-borrow from time to time until September 16, 2013, up to the lesser of \$5,000,000 or 80% of the Company's eligible accounts receivable, and provides for an interest rate of the greater of the prime rate as quoted in the Wall Street Journal or five percent (5%). As collateral for such indebtedness, the Company has granted Sovereign Bank a security interest covering all of the Company's accounts receivable. As of this date, the Company has not drawn down any amounts under the line of credit portion of the Amended Loan Agreement.

Item 2.03 — Creation of a Direct Financial Obligation or an Obligation under an Off-Balance Sheet Arrangement of a Registrant.

The information set forth in Item 1.01 of this Current Report is incorporated in this Item 2.03 by reference.

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

TGC INDUSTRIES, INC.

Date: September 20, 2012 By: /s/ Wayne A. Whitener