

SECURITIES AND EXCHANGE COMMISSION

FORM 8-K

Current report filing

Filing Date: **2013-05-16** | Period of Report: **2013-05-16**  
SEC Accession No. [0001193125-13-223528](#)

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FILER

**QUANTUM FUEL SYSTEMS TECHNOLOGIES  
WORLDWIDE, INC.**

CIK: **1166380** | IRS No.: **330933072** | State of Incorporation: **DE** | Fiscal Year End: **1231**  
Type: **8-K** | Act: **34** | File No.: **000-49629** | Film No.: **13849661**  
SIC: **3714** Motor vehicle parts & accessories

Mailing Address

17872 CARTWRIGHT ROAD  
IRVINE CA 92614

Business Address

17872 CARTWRIGHT ROAD  
IRVINE CA 92614  
949-399-4500

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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, DC 20549**

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**FORM 8-K**

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**CURRENT REPORT PURSUANT TO SECTION 13 OR 15(D) OF  
THE SECURITIES EXCHANGE ACT OF 1934**

**Date of Report (Date of earliest event reported) May 16, 2013**

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**QUANTUM FUEL SYSTEMS TECHNOLOGIES  
WORLDWIDE, INC.**

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

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**Commission File Number 0-49629**

**Delaware**  
**(State or other jurisdiction**  
**of incorporation)**

**33-0933072**  
**(IRS Employer**  
**Identification No.)**

**25242 Arctic Ocean Drive, Lake Forest, CA, 92630**  
**(Address of principal executive offices, including Zip Code)**

**(949) 399-4500**  
**(Registrant' s telephone number, including area code)**

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Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
  - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
  - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
  - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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## Item 1.01. Entry Into a Material Definitive Agreement.

On May 16, 2013, Quantum Fuel Systems Technologies Worldwide, Inc. (the “*Company*”) entered into a securities purchase agreement (the “*Securities Purchase Agreement*”) with the investor identified therein (“*Buyer*”) relating to a registered direct offering by the Company (the “*Offering*”) of 4,918,032 shares (the “*Shares*”) of the Company’s common stock, par value \$0.02 per share (the “*Common Stock*”), and a warrant (the “*Warrant*”) to initially purchase up to an aggregate of 2,950,819 shares of Common Stock (the “*Warrant Shares*”), for an aggregate purchase price of \$3.0 million. The purchase price per share of Common Stock equaled the Company’s consolidated closing bid price on May 15, 2013 of \$0.61.

The Securities Purchase Agreement contains customary representations, warranties and agreements by us, customary conditions to closing, indemnification obligations of the Company, including for liabilities under the Securities Act of 1933, as amended, other obligations of the parties and termination provisions. The representations, warranties and covenants contained in the Securities Purchase Agreement were made only for purposes of such agreement and as of specific dates, were solely for the benefit of the parties to such agreement, and may be subject to limitations agreed upon by the contracting parties. The Securities Purchase Agreement also contains a covenant from the Buyer that it will not engage in any short selling involving the Shares, the Warrant and the Warrant Shares for a period of 90 days following the closing of the Offering. The Company has also agreed, pursuant to the Securities Purchase Agreement, to seek the approval of its stockholders of a proposal to effectuate a reverse split of the Common Stock in an attempt to regain compliance with the minimum bid price requirement of The NASDAQ Capital Market. A copy of the Securities Purchase Agreement is filed herewith as Exhibit 10.1 to this Current Report on Form 8-K and is incorporated herein by reference. The description of the material terms of the Securities Purchase Agreement is qualified in its entirety by reference to Exhibit 10.1.

The Warrant has a five-year term from the date of issuance, is exercisable on or after the date of issuance and includes provisions governing adjustments to the number of Warrant Shares issuable upon exercise thereof for stock dividends, stock splits and similar events. The Warrant allows the holder, at any time after 30 days from the issuance of the Warrant through its expiration, to exchange all or part of the warrant for, at the Company’s option, cash or shares of Common Stock (provided certain conditions are satisfied), or any combination thereof, equal to the value of the Warrant at the time of the exchange based on a prescribed Black-Scholes formula (the “*Exchange Right*”). If the number of shares of Common Stock required to settle the exchange would exceed 19.99% of the issued and outstanding shares prior to the closing of the Offering, then the value of the shares in excess of the 19.99% may be settled by the Company in cash or by delivery of a one-year 10% unsecured promissory note. The holder may not exchange the Warrant unless the trading price for a share of Common Stock is below the Warrant’s exercise price. The Warrant also provides that, under certain circumstances, the Company will have the ability to cause the holder to exercise the Warrant for cash. The Warrant also provides that if the Common Stock is delisted from the NASDAQ Capital Market, then the number of Warrant Shares underlying the Warrant at the time of such delisting shall automatically be adjusted upward by multiplying the number of Warrant Shares underlying the Warrant at the time of the delisting by 116.667%. A copy of the Warrant is filed herewith as Exhibit 4.1 to this Current Report on Form 8-K and incorporated herein by reference. The description of the material terms of the Warrant is qualified in its entirety by reference to Exhibit 4.1.

Roth Capital Partners, LLC (the “*Placement Agent*”) served as the Company’s exclusive placement agent in connection with the Offering and will receive a cash fee of \$210,000, which represents 7.0% of the gross proceeds received by the Company from the Offering.

The net proceeds realized by the Company in connection with the Offering, after deducting the Placement Agent’s fee and other Offering expenses, are expected to be approximately \$2.7 million. The Company intends to use the net proceeds from the Offering for working capital and other general corporate purposes.

The Shares, Warrant and Warrant Shares are being offered and sold pursuant to a prospectus supplement dated as of May 16, 2013, which has been filed with the Securities and Exchange Commission (“*SEC*”) in connection with a takedown from the Company’s shelf registration statement on Form S-3 (File No. 333-176772), which became effective on September 29, 2011, and the base prospectus dated September 29, 2011. The Offering is expected to close on May 16, 2013, subject to the satisfaction of customary closing conditions.

The legal opinion and consent of Kenneth R. Lombardo, the Company' s General Counsel relating to the Shares, the Warrant and the Warrant Shares, is filed as Exhibit 5.1 to this Current Report on Form 8-K and is incorporated herein by reference.

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The Company's press release, dated May 16, 2013, announcing the Offering is filed as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated herein by reference.

**Item 1.02 Termination of a Material Definitive Agreement.**

On December 28, 2012, the Company entered into an At The Market Offering Agreement (the "Sales Agreement") with Ascendant Capital Markets, LLC ("Ascendant"), pursuant to which the Company, from time to time, could issue and sell through Ascendant, acting as the Company's sales agent, shares of Common Stock, for aggregate gross sales proceeds of up to \$5,000,000, subject to the terms and conditions set forth in the Sales Agreement.

Effective at the close of business on May 15, 2013, the Company terminated the Sales Agreement. The Company has sold 4,086,612 shares under the Sales Agreement for aggregate gross proceeds of \$2,611,334 (excluding commissions, fees and expenses).

A description of the terms and conditions of the Sales Agreement is set forth in the Company's current report on Form 8-K filed on December 28, 2012 and is incorporated herein by reference.

**Item 8.01 Other Events.**

On May 16, 2013, pursuant to Rule 424(b)(3) under the Securities Act of 1933, as amended (the "Securities Act"), the Company filed a prospectus supplement (the "ATM Prospectus Supplement") amending the prospectus supplement dated December 28, 2012 related to the Sales Agreement with Ascendant, to terminate any future sales of its common stock under the ATM Prospectus Supplement pursuant to the Sales Agreement.

**Item 9.01. Financial Statements and Exhibits.**

<u>Exhibit No.</u>	<u>Description</u>
4.1	Warrant to Purchase Common Stock
5.1	Opinion of Kenneth R. Lombardo, General Counsel
10.1	Securities Purchase Agreement, dated May 16, 2013, between Quantum Fuel Systems Technologies Worldwide, Inc. and the investor named therein.
99.1.	Press Release dated May 16, 2013

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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.

**QUANTUM FUEL SYSTEMS TECHNOLOGIES  
WORLDWIDE, INC.**

May 16, 2013

By: /s/ Kenneth R. Lombardo

Kenneth R. Lombardo

General Counsel

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## EXHIBIT INDEX

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## QUANTUM FUEL SYSTEMS TECHNOLOGIES WORLDWIDE, INC.

## WARRANT TO PURCHASE COMMON STOCK

Initial Number of Warrant Shares: 2,950,819

Warrant No.: 1

Date of Issuance: May 16, 2013 (“*Issuance Date*”)

Quantum Fuel Systems Technologies Worldwide, Inc., a Delaware corporation (the “*Company*”), hereby certifies that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Crede CG III, Ltd., the registered holder hereof (such registered holder or its permitted assigns, the “*Holder*”) is entitled, subject to the terms and conditions set forth below, to purchase from the Company, at the Exercise Price (as defined below) then in effect, upon exercise of this Warrant to Purchase Common Stock (including any Warrants to Purchase Common Stock issued in exchange, transfer or replacement hereof, the “*Warrant*”), at any time or times on or after the Issuance Date but not after 11:59 p.m. New York time on the Expiration Date, that number (subject to adjustment as provided herein) of fully paid and non-assessable shares of Common Stock (as defined below) set forth above (the “*Warrant Shares*”). Except as otherwise defined herein, capitalized terms in this Warrant shall have the meanings set forth in Section 16.

This Warrant to Purchase Common Stock (the “*Warrant*”) is being issued pursuant to that certain Securities Purchase Agreement, dated as of May 16, 2013, by and among the Company and the investor (the “*Buyer*”) referred to therein (the “*Securities Purchase Agreement*”). The initial number of Warrant Shares set forth above shall be equal to 60% of the aggregate Purchase Price (as defined in the Securities Purchase Agreement) divided by the Purchase Price per share. In the event that the Common Stock is delisted from the Principal Market (as defined in the Securities Purchase Agreement), the warrant coverage under this Warrant will automatically increase, immediately upon such delisting, with no further action required by either party, to 70% of the aggregate Purchase Price divided by the Purchase Price per share. In the event a portion of the Warrant has been exercised pursuant to Section 1 hereto and/or exchanged pursuant to Section 4 hereto prior to such delisting, the remaining Warrant shall be grossed up by 116.667% immediately following such delisting, with no further action required by either party. For illustrative purposes only, if the remaining Warrant is exercisable or exchangeable into 1,000,000 shares of Common Stock, then immediately upon such delisting, the Warrant shall be exercisable or exchangeable into 1,166,667 shares of Common Stock.

#### 1. EXERCISE OF WARRANT.

(a) ***Mechanics of Exercise.*** Subject to the terms and conditions hereof (including, without limitation, the limitations set forth in Section 1(f)), this Warrant may be exercised by the Holder on any day on or after the Issuance Date in whole or in part, by delivery (whether via facsimile or otherwise) of a written notice, in substantially the form attached hereto as Exhibit A (the “*Exercise Notice*”) along with payment to the Company of an amount equal to the Exercise Price in effect on the date of such exercise multiplied by the number of Warrant Shares as to which this Warrant is being so exercised (in respect of such specific exercise, the “*Aggregate*

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**Exercise Price**) in cash, via wire transfer of immediately available funds if the Holder did not notify the Company in such Exercise Notice that such exercise was made pursuant to a Cashless Exercise (as defined in Section 1(d)). The Holder shall not be required to deliver the original of this Warrant in order to effect an exercise hereunder. Execution and delivery of an Exercise Notice with respect to less than all of the Warrant Shares shall have the same effect as cancellation of the original of this Warrant and issuance of a new Warrant evidencing the right to purchase the remaining number of Warrant Shares. Execution and delivery of an Exercise Notice for all of the then-remaining Warrant Shares shall have the same effect as cancellation of the original of this Warrant after delivery of the Warrant Shares in accordance with the terms hereof. On or before the first Trading Day following the date on which the Company has received an Exercise Notice, the Company shall transmit by facsimile an acknowledgment of confirmation of receipt of such Exercise Notice and Aggregate Exercise Price, in the form attached hereto as Exhibit C, to the Holder and the Company's transfer agent (the "**Transfer Agent**"). On or before the third Trading Day following the date on which the Company has received such Exercise Notice and the Aggregate Exercise Price, the Company shall (X) provided that the Transfer Agent is participating in The Depository Trust Company ("**DTC**") Fast Automated Securities Transfer Program (which the Company shall cause the Transfer Agent to do at Holder's request), upon the request of the Holder, credit such aggregate number of shares of Common Stock to which the Holder is entitled pursuant to such exercise to the Holder's or its designee's balance account with DTC through its Deposit/Withdrawal at Custodian system ("DWAC"), or (Y) if the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program, issue and deliver to the Holder or, at the Holder's instruction pursuant to the Exercise Notice, the Holder's agent or designee, in each case, sent by reputable overnight courier to the address as specified in the applicable Exercise Notice, a certificate, registered in the Company's share register in the name of the Holder or its designee (as indicated in the applicable Exercise Notice), for the number of shares of Common Stock to which the Holder is entitled pursuant to such exercise. Upon delivery of an Exercise Notice and the Aggregate Exercise Price, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date such Warrant Shares are credited to the Holder's DTC account or the date of delivery of the certificates evidencing such Warrant Shares (as the case may be). If this Warrant is submitted in connection with any exercise pursuant to this Section 1(a) and the number of Warrant Shares represented by this Warrant submitted for exercise is greater than the number of Warrant Shares being acquired upon an exercise, then, at the request of the Holder and upon surrender hereof by the Holder at the principal office of the Company, the Company shall as soon as practicable and in no event later than three Trading Days after any exercise and at its own expense, issue and deliver to the Holder (or its designee) a new Warrant (in accordance with Section 7(d)) representing the right to purchase the number of Warrant Shares purchasable immediately prior to such exercise under this Warrant, less the number of Warrant Shares with respect to which this Warrant is exercised. No fractional shares of Common Stock are to be issued upon the exercise of this Warrant, but rather the number of shares of Common Stock to be issued shall be rounded down to the nearest whole number. The Company shall pay any and all taxes and fees which may be payable with respect to the issuance and delivery of Warrant Shares upon exercise of this Warrant. Notwithstanding anything to the contrary contained in this Warrant, the Company shall remain DWAC eligible for so long as this Warrant or any replacement Warrant remains outstanding.

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(b) Exercise Price. For purposes of this Warrant, “**Exercise Price**” means \$0.671, subject to adjustment as provided herein.

(c) Company’s Failure to Timely Deliver Securities. If the Aggregate Exercise Price has been delivered to the Company and the Company shall fail, for no reason of its own and despite using reasonable best efforts, to issue (or cause to be issued) to the Holder within three Trading Days after receipt of the applicable Exercise Notice (and the Aggregate Exercise Price) or Exchange Notice, as applicable, a certificate for the number of shares of Common Stock to which the Holder is entitled and register such shares of Common Stock on the Company’s share register or to credit the Holder’s balance account with DTC for such number of shares of Common Stock to which the Holder is entitled upon the Holder’s exercise of this Warrant (as the case may be), then, in addition to all other remedies available to the Holder, the Company shall pay in cash to the Holder on each day after such third Trading Day that the issuance of such shares of Common Stock is not timely effected an amount equal to 2% of the product of (A) the aggregate number of shares of Common Stock not issued to the Holder on a timely basis and to which the Holder is entitled and (B) the Closing Sale Price of the Common Stock on the Trading Day immediately preceding the last possible date on which the Company could have issued such shares of Common Stock to the Holder without violating Section 1(a). In addition to the foregoing, if within three trading Days after the Company’s receipt of the applicable Exercise Notice or Exchange Notice, as applicable, the Company shall fail to issue and deliver a certificate to the Holder and register such shares of Common Stock on the Company’s share register or to credit the Holder’s balance account with DTC for the number of shares of Common Stock to which the Holder is entitled upon the Holder’s exercise or exchange hereunder (as the case may be), and if on or after such third (3<sup>rd</sup>) Trading Day the Holder (or any other Person in respect, or on behalf, of the Holder) purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of all or any portion of the number of shares of Common Stock, or a sale of a number of shares of Common Stock equal to all or any portion of the number of shares of Common Stock, issuable upon such exercise or exchange that the Holder so anticipated receiving from the Company, then, in addition to all other remedies available to the Holder, the Company shall, within three Business Days after the Holder’s request and in the Holder’s discretion, either (i) pay cash to the Holder in an amount equal to the Holder’s total purchase price (including brokerage commissions and other out-of-pocket expenses, if any) for the shares of Common Stock so purchased (including, without limitation, by any other Person in respect, or on behalf, of the Holder) (the “**Buy-In Price**”), at which point the Company’s obligation to so issue and deliver such certificate or credit the Holder’s balance account with DTC for the number of shares of Common Stock to which the Holder is entitled upon the Holder’s exercise or exchange hereunder (as the case may be) (and to issue such shares of Common Stock) shall terminate, or (ii) promptly honor its obligation to so issue and deliver to the Holder a certificate or certificates representing such shares of Common Stock or credit the Holder’s balance account with DTC for the number of shares of Common Stock to which the Holder is entitled upon the Holder’s exercise or exchange hereunder (as the case may be) and pay cash to the Holder in an amount equal to the excess (if any) of the Buy-In Price over the product of (A) such number of shares of Common Stock multiplied by (B) the lowest Closing Sale Price of the Common Stock on any Trading Day during the period commencing on the date of the applicable Exercise Notice or Exchange Notice, as the case may be, and ending on the date of such issuance and payment under this clause (ii).

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(d) Cashless Exercise. Notwithstanding anything contained herein to the contrary (other than Section 1(f) below), if at the time of an exercise hereof any Equity Conditions Failure described in clause (vi) of the definition of “Equity Conditions” shall then exist, then the Holder may, in its sole discretion, exercise this Warrant in whole or in part and, in lieu of making the cash payment otherwise contemplated to be made to the Company upon such exercise in payment of the Aggregate Exercise Price, elect instead to make a cashless exercise (each a “*Cashless Exercise*”) under this Section 1(d). A Cashless Exercise under this Section 1(d) may be made, at the election of the Holder from time to time and irrespective of any other election to make a Cashless Exercise, so that upon such exercise Holder shall receive the “Net Number” of shares of Common Stock determined according to the following formula:

$$\text{Net Number} = \frac{(A \times B) - (A \times C)}{B}$$

For purposes of the foregoing formula:

**A** = the total number of shares with respect to which this Warrant is then being exercised.

**B** = as applicable: (i) the Closing Sale Price of the Common Stock on the Trading Day immediately preceding the date of the applicable Exercise Notice if such Exercise Notice is (1) both executed and delivered pursuant to Section 1(a) on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 1(a) on a Trading Day prior to the opening of “regular trading hours” (as defined in Rule 600(b)(64) of Regulation NMS promulgated under the federal securities laws) on such Trading Day. (ii) the Bid Price of the Common Stock as of the time of the Holder’s execution of the applicable Exercise Notice if such Exercise Notice is executed during “regular trading hours” on a Trading Day and is delivered within two hours thereafter pursuant to Section 1(a) or (iii) the Closing Sale Price of the Common Stock on the date of the applicable Exercise Notice if the date of such Exercise Notice is a Trading Day and such Exercise Notice is both executed and delivered pursuant to Section 1(a) after the close of “regular trading hours” on such Trading Day.

**C** = the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

Notwithstanding anything to the contrary contained herein, exercise of this Warrant on a cashless basis may also be made from time to time at the election of the Holder (and irrespective of any election to make a Cashless Exercise under this Section 1(d)), pursuant to the exchange provisions of Section 4 of this Warrant.

(e) Disputes. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the number of Warrant Shares to be issued pursuant to the terms hereof (including, without limitation, the Net Number), the Company shall promptly issue to the

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Holder the number of Warrant Shares that are not disputed, provided that following such issuance to Holder such dispute shall be resolved in accordance with Section 13.

(f) Limitations on Exercises and Exchanges. Notwithstanding anything to the contrary contained in this Warrant, this Warrant shall not be exercisable or exchangeable by the Holder hereof to the extent (but only to the extent) that the Holder or any of its affiliates would beneficially own in excess of 9.9% (the “**Maximum Percentage**”) of the Common Stock following such exercise. To the extent the above limitation applies, the determination of whether this Warrant shall be exercisable or exchangeable (vis-à-vis other convertible, exercisable or exchangeable securities owned by the Holder or any of its affiliates) and of which such securities shall be exercisable or exchangeable (as among all such securities owned by the Holder) shall, subject to such Maximum Percentage limitation, be determined on the basis of the first submission to the Company for conversion, exercise or exchange (as the case may be). No prior inability to exercise or exchange this Warrant pursuant to this Section 1(f) shall have any effect on the applicability of the provisions of this Section 1(f) with respect to any subsequent determination of exercisability or exchangeability. For the purposes of this Section 1(f), beneficial ownership and all determinations and calculations (including, without limitation, with respect to calculations of percentage ownership) shall be determined in accordance with Section 13(d) of the 1934 Act (as defined in the Securities Purchase Agreement) and the rules and regulations promulgated thereunder. The provisions of this Section 1(f) shall be implemented in a manner otherwise than in strict conformity with the terms of this Section 1(f) to correct this Section 1(f) (or any portion hereof) which may be defective or inconsistent with the intended Maximum Percentage beneficial ownership limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such Maximum Percentage limitation. The limitations contained in this Section 1(f) shall apply to a successor Holder of this Warrant. The holders of Common Stock shall be third party beneficiaries of this Section 1(f) and the Company may not waive this Section 1(f) without the consent of holders of a majority of its Common Stock. For any reason at any time, upon the written or oral request of the Holder, the Company shall within three Business Days confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding, including by virtue of any prior conversion or exercise or exchange of convertible or exercisable or exchangeable securities into Common Stock, including, without limitation, pursuant to this Warrant or securities issued pursuant to the Securities Purchase Agreement.

(g) Exercise/Exchange Cap. Notwithstanding any other provision of this Warrant and in order to comply with the rules and regulations of the Principal Market, the Company shall not issue any shares of Common Stock upon exercise or exchange of this Warrant if the issuance of such shares of Common Stock would, when added to the number of Common Shares (as defined in the Securities Purchase Agreement) issued pursuant to the Securities Purchase Agreement and prior Warrant exercises and Section 4 Exchanges, exceed in the aggregate 19.99% of the total outstanding shares of Common Stock (which number of shares shall be adjusted as necessary upon the occurrence of any of the events that would cause an adjustment to the number of Warrant Shares issuable hereunder in order to comply with this limitation) outstanding just prior to the Closing under the Securities Purchase Agreement (the “**Exchange Cap**”), except that such limitation shall not apply in the event that the Company obtains the approval of its stockholders as required by the applicable rules of the Principal Market for issuances of shares of Common Stock in excess of such amount. In the event that the number of Warrant Shares required to

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satisfy an exercise of this Warrant would exceed the Exchange Cap on a cumulative basis, then the remaining value of the Warrant Shares receivable upon exercise of the unexercised portion of the Warrant after the Exchange Cap is reached shall be settled by the Company in either, at the Company's option, cash or the issuance of a promissory note payable to the Buyer (an "**Exchange Settlement Note**"). Any such Exchange Settlement Note, if issued, will represent an unsecured subordinated obligation payable in twelve (12) months with an annualized interest rate of ten percent (10%) payable upon maturity.

(h) **Insufficient Authorized Shares.** The Company shall at all times keep reserved for issuance under this Warrant a number of shares of Common Stock as shall be necessary to satisfy the Company's obligation to issue shares of Common Stock hereunder (without regard to any limitation otherwise contained herein with respect to the number of shares of Common Stock that may be acquirable upon exercise or exchange of this Warrant). If, notwithstanding the foregoing, and not in limitation thereof, at any time while any of the Warrants remain outstanding the Company does not have a sufficient number of authorized and unreserved shares of Common Stock to satisfy its obligation to reserve for issuance upon exercise or exchange of the Warrants at least a number of shares of Common Stock equal to the number of shares of Common Stock as shall from time to time be necessary to effect the exercise or exchange of all of the Warrants then outstanding (the "**Required Reserve Amount**") and the failure to have the Required Reserve Amount (an "**Authorized Share Failure**"), then the Company shall immediately take all action necessary to increase the Company's authorized shares of Common Stock to an amount sufficient to allow the Company to reserve the Required Reserve Amount for all the Warrants then outstanding. Without limiting the generality of the foregoing sentence, as soon as practicable after the date of the occurrence of an Authorized Share Failure, but in no event later than ninety (90) days after the occurrence of such Authorized Share Failure, the Company shall hold a meeting of its shareholders for the approval of an increase in the number of authorized shares of Common Stock. In connection with such meeting, the Company shall provide each shareholder with a proxy statement and shall use its reasonable efforts to solicit its shareholders' approval of such increase in authorized shares of Common Stock.

(i) **Activity Restrictions.** For so long as Holder or any of its Affiliates holds any Warrants or any Warrant Shares, neither Holder nor any Affiliate will: (i) vote any shares of Common Stock beneficially owned by it, solicit any proxies, or seek to advise or influence any Person with respect to any voting securities of the Company; (ii) engage or participate in any actions, plans or proposals which relate to or would result in (a) acquiring additional securities of the Company, alone or together with any other Person, which would result in Buyer or its Affiliates beneficially owning (within the meaning of Section 13(d) under the 1934 Act) more than 9.9% of the Common Stock, (b) an extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving Company or any of its Subsidiaries, (c) a sale or transfer of a material amount of assets of the Company or any of its Subsidiaries, (d) any change in the present board of directors or management of the Company, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board, (e) any material change in the present capitalization or dividend policy of the Company, (f) any other material change in the Company's business or corporate structure, including but not limited to, if the Company is a registered closed-end investment company, any plans or proposals to make any changes in its investment policy for which a vote is required by Section 13 of the Investment Company Act of 1940, (g) changes in the Company's charter, bylaws or instruments

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corresponding thereto or other actions which may impede the acquisition of control of the Company by any Person, (h) causing a class of securities of the Company to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association, (i) a class of equity securities of the Company becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Act, or (j) any action, intention, plan or arrangement similar to any of those enumerated above; or (iii) request the Company or its directors, officers, employees, agents or representatives to amend or waive any provision of this Section 1(i). The restrictions contained in this Section 1(i) shall not limit Holder's rights to enforce its rights or exercise its rights as to the Securities or under this Warrant or the Transaction Documents.

2. ADJUSTMENT OF EXERCISE PRICE AND NUMBER OF WARRANT SHARES. The Exercise Price and number of Warrant Shares issuable upon exercise of this Warrant are subject to adjustment from time to time as set forth in this Section 2.

(a) Stock Dividends and Splits. Without limiting any provision of Section 3, if the Company, at any time on or after the date of the Securities Purchase Agreement, (i) pays a stock dividend on one or more classes of its then outstanding shares of Common Stock or otherwise makes a distribution on any class of capital stock that is payable in shares of Common Stock, (ii) subdivides (by any stock split, stock dividend, recapitalization or otherwise) one or more classes of its then outstanding shares of Common Stock into a larger number of shares or (iii) combines (by combination, reverse stock split or otherwise) one or more classes of its then outstanding shares of Common Stock into a smaller number of shares, then in each such case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to clause (i) above shall become effective immediately after the record date for the determination of shareholders entitled to receive such dividend or distribution, and any adjustment pursuant to clause (ii) or (iii) above shall become effective immediately after the effective date of such subdivision or combination. If any event requiring an adjustment under this Section 2(a) occurs during the period that an Exercise Price is calculated hereunder, then the calculation of such Exercise Price shall be adjusted appropriately to reflect such event.

(b) Number of Warrant Shares. Notwithstanding anything to the contrary contained herein, upon an Exchange as set forth in Section 4, the number of Warrant Shares for which this Warrant is exercisable immediately following such Exchange shall be equal to (i) the number of Warrant Shares for which this Warrant was exercisable immediately prior to such Exchange less (ii) the number of Warrant Shares under the portion of the Warrant exchanged in Exchange (e.g., if this Warrant is exercisable (without regard to limitations hereunder) for 100 shares immediately prior to an Exchange and 30% of the Warrant is submitted for Exchange (i.e., the Warrant to acquire 30 Warrant Shares is submitted for Exchange), then this Warrant will be exercisable for 70 Warrant Shares immediately following the completion of such Exchange), and the number of such Warrant Shares issuable hereunder shall automatically be adjusted, as necessary, to enable the Company to comply with its obligations to issue the full Exchange Number under Section 4 upon any Exchange hereunder.

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(c) Calculations. All calculations under this Section 2 shall be made by rounding to the nearest 1/10000<sup>th</sup> of cent and the nearest 1/100<sup>th</sup> of a share, as applicable. The number of shares of Common Stock outstanding at any given time shall not include shares owned or held by or for the account of the Company, and the disposition of any such shares shall be considered an issue or sale of Common Stock.

### 3. FUNDAMENTAL TRANSACTIONS.

(a) Fundamental Transactions. If any liquidation, capital reorganization, reclassification of the capital stock of the Company, consolidation or merger of the Company with another entity in which the Company is not the surviving corporation, or sale, transfer or other disposition of all or substantially all of the Company's assets to another entity shall be effected (any such transaction being hereinafter referred to as a "**Fundamental Transaction**"), then this Warrant shall be deemed to be exercised in full immediately upon the closing of such Fundamental Transaction (without the payment of any consideration by the Holder) and the Holder shall thereafter have the right to receive in lieu of the Warrant Shares issuable upon such exercise of this Warrant, such shares of stock, securities or assets (including cash) as would have been issuable or payable with respect to or in exchange for a number of Warrant Shares equal to the number of Warrant Shares immediately theretofore issuable upon exercise of this Warrant, had such reorganization, reclassification, consolidation, merger, sale, transfer or other disposition not taken place.

(b) Black Scholes Value-FT. Notwithstanding the foregoing and the provisions of Section 3(a), at the request of the Holder at any time prior to the closing of a Fundamental Transaction, the Company shall, at the time of closing of the Fundamental Transaction, purchase this Warrant from the Holder on the date of the consummation of such Fundamental Transaction by paying to the Holder cash in an amount equal to the Black Scholes Value-FT.

4. EXCHANGE RIGHTS. In addition to the rights of the Holder under Section 1, this Warrant shall be exchangeable by the Holder on a cashless basis as further set forth below.

(a) Exchange Right. The Holder shall be entitled at any time and from time to time from and after the date that is 30 days after the Issuance Date and prior to the Expiration Date, by written notice to the Company in the form of Exhibit B attached hereto (an "**Exchange Notice**") to exchange (an "**Exchange**") all or any portion of this Warrant for cash (or delivery of an Exchange Settlement Note if permitted hereunder) or, if elected by the Company in compliance with Section 1(g), fully paid and non-assessable shares of Common Stock, all as further set forth in this Section 4 (subject to compliance at all times with Section 4(e)). Subject to the foregoing, the Company may elect to settle all or part of an Exchange in shares of Common Stock. If the Company does not elect to honor all of such Exchange in shares of Common Stock (or is not permitted to elect to honor such Exchange in shares of Common Stock due to Section 1(f), Section 1(g) or Section 4(e)), then the Company shall pay to the Holder, within three Business Days after receipt of the applicable Exchange Notice, the Exchange Amount in cash in respect of such Exchange, minus the portion of the Exchange Amount the Company elected to settle in shares of Common Stock. In the event that the number of Common Shares required to consummate the Exchange would exceed the Exchange Cap on a cumulative basis, then the remaining value of the Common Shares receivable upon such Exchange after the Exchange Cap

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is reached shall be settled by the Company in either, at the Company's option, cash or the issuance of an Exchange Settlement Note.

(b) Exchange Number. If the Company is permitted to honor an Exchange by issuing shares of Common Stock in respect thereof, then the number of shares of Common Stock issuable in respect of such Exchange shall be determined by dividing (x) the Exchange Amount (as defined below) in respect of such Exchange by (y) the Exchange Price (as defined below) in respect of such Exchange (such number of shares of Common Stock so issuable being the ("**Exchange Number**").

(c) Definitions.

(i) "**Exchange Amount**" means the Black-Scholes Exchange Value of the portion of the Warrant being exchanged pursuant to Section 4(a), determined as of the applicable Exchange Date.

(ii) "**Exchange Price**" means the Closing Bid Price as of two Trading Days prior to the Exchange Date.

(d) Mechanics of Exchange.

(i) Optional Exchange. To exchange any Exchange Amount on any date (an "**Exchange Date**"), the Holder shall transmit by facsimile (or otherwise deliver), for receipt on such date, a copy of an executed Exchange Notice. The Holder shall not be required to deliver the original of this Warrant in order to effect an exchange hereunder. Execution and delivery of an Exchange Notice with respect to less than all of the Warrant Shares shall have the same effect as cancellation of the original of this Warrant and issuance of a new Warrant evidencing the right to purchase the remaining number of Warrant Shares. Execution and delivery of an Exchange Notice for all of the then-remaining Warrant Shares shall have the same effect as cancellation of the original of this Warrant after delivery of the Warrant Shares in accordance with the terms hereof.

(ii) Exchange for Shares of Common Stock. Subject to Section 4(e), if the Company is permitted to elect, and has elected, to pay the Exchange Amount in shares of Common Stock in respect of a specific Exchange Notice, which election shall be made on or before the first Trading Day following the date on which the Company has received such Exchange Notice, the Company shall transmit by facsimile an acknowledgment of confirmation of receipt of such Exchange Notice, in the form attached hereto as Exhibit C, to the Holder and the Transfer Agent and stating that such Exchange Notice shall be honored in shares of Common Stock. In such event, then on or before the third Trading Day following the date on which the Company has received such Exchange Notice, the Exchange Number of shares of Common Stock shall be issued to Holder, or at Holder's instruction, as if such shares of Common Stock were issuable upon an exercise under Section 1 hereof.

(iii) Equity Condition Failure. Notwithstanding the above, if at the time on an Exchange Date, an Equity Condition Failure is reasonably likely to occur or has occurred and is still then continuing, then the Company shall not be permitted to elect to honor

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such Exchange in shares of Common Stock and shall instead honor such Exchange in cash or, in the event that the number of Common Shares then issuable to the Buyer would exceed the Exchange Cap on a cumulative basis, then at the Company's option the remaining value of the Common Shares issuable in the Exchange after the Exchange Cap is reached may be settled by the Company with the issuance of an Exchange Settlement Note instead of cash.

(iv) Disputes. Dispute as to the determination of the Exchange Amount, the Exchange Price or the arithmetic calculation of the number of Warrant Shares to be issued pursuant to the terms hereof, and shares subject to such dispute, shall be handled in the same manner as for disputes under Section 1(e) hereof.

(e) Restrictions on Exchange for Shares of Common Stock. Notwithstanding any other term of this Warrant, if there is a legal or regulatory impediment to the Company complying with its obligations under this Section 4 (including the requirement for the Company to Exchange the Warrant for shares of Common Stock upon receipt of an Exchange Notice), then the terms of this Warrant will be deemed to exclude the right to Exchange the Warrant for shares of Common Stock under this Section 4 and the Company shall instead honor such Exchange in cash or, where the Exchange Cap comprises such legal or regulatory impediment, at the Company's option with the issuance of an Exchange Settlement Note instead of cash.

(f) Restriction on Holder's Exercise of Exchange Right. Notwithstanding any other term of this Warrant, the Holder shall not have the right to Exchange this Warrant (in whole or in part) under this Section 4 if the trading price on the applicable Eligible Market is greater than the Exercise Price then in effect.

5. NON-CIRCUMVENTION. The Company hereby covenants and agrees that the Company will not, by amendment of its Certificate of Incorporation (as defined in the Securities Purchase Agreement), Bylaws (as defined in the Securities Purchase Agreement) or through any reorganization, transfer of assets, consolidation, merger, scheme of arrangement, dissolution, issue or sale of securities, or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, and will at all times in good faith carry out all the provisions of this Warrant and take all action as may be required to protect the rights of the Holder. Without limiting the generality of the foregoing, the Company (i) shall not increase the par value of any shares of Common Stock receivable upon the exercise of this Warrant above the Exercise Price then in effect, (ii) shall take all such actions as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and non-assessable shares of Common Stock upon the exercise of this Warrant, and (iii) shall, so long as any of the Warrants are outstanding, take all action necessary to reserve and keep available out of its authorized and unissued shares of Common Stock, solely for the purpose of effecting the exercise of the Warrants, the maximum number of shares of Common Stock as shall from time to time be necessary to effect the exercise of the Warrants then outstanding (without regard to any limitations on exercise).

6. WARRANT HOLDER NOT DEEMED A STOCKHOLDER. The Holder, solely in its capacity as a holder of this Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained

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in this Warrant be construed to confer upon the Holder, solely in its capacity as the Holder of this Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which it is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company.

## 7. REISSUANCE OF WARRANTS.

(a) Transfer of Warrant. If this Warrant is to be transferred, the Holder shall surrender this Warrant to the Company, whereupon the Company will forthwith issue and deliver upon the order of the Holder a new Warrant (in accordance with Section 7(d)), registered as the Holder may request, representing the right to purchase the number of Warrant Shares being transferred by the Holder and, if less than the total number of Warrant Shares then underlying this Warrant is being transferred, a new Warrant (in accordance with Section 7(d)) to the Holder representing the right to purchase the number of Warrant Shares not being transferred.

(b) Lost, Stolen or Mutilated Warrant. Upon receipt by the Company of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant (as to which a written certification and the indemnification contemplated below shall suffice as such evidence), and, in the case of loss, theft or destruction, of any indemnification undertaking by the Holder to the Company in customary and reasonable form and, in the case of mutilation, upon surrender and cancellation of this Warrant, the Company shall execute and deliver to the Holder a new Warrant (in accordance with Section 7(d)) representing the right to purchase the Warrant Shares then underlying this Warrant.

(c) Exchangeable for Multiple Warrants. This Warrant is exchangeable, upon the surrender hereof by the Holder at the principal office of the Company, for a new Warrant or Warrants (in accordance with Section 7(d)) representing in the aggregate the right to purchase the number of Warrant Shares then underlying this Warrant, and each such new Warrant will represent the right to purchase such portion of such Warrant Shares as is designated by the Holder at the time of such surrender; provided, however, no warrants for fractional shares of Common Stock shall be given.

(d) Issuance of New Warrants. Whenever the Company is required to issue a new Warrant pursuant to the terms of this Warrant, such new Warrant (i) shall be of like tenor with this Warrant, (ii) shall represent, as indicated on the face of such new Warrant, the right to purchase the Warrant Shares then underlying this Warrant (or in the case of a new Warrant being issued pursuant to Section 7(a) or Section 7(c), the Warrant Shares designated by the Holder which, when added to the number of shares of Common Stock underlying the other new Warrants issued in connection with such issuance, does not exceed the number of Warrant Shares then underlying this Warrant), (iii) shall have an issuance date, as indicated on the face of such new Warrant which is the same as the Issuance Date, and (iv) shall have the same rights and conditions as this Warrant.

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8. **NOTICES.** Whenever notice is required to be given under this Warrant, unless otherwise provided herein, such notice shall be given in accordance with the notice provision of the Securities Purchase Agreement. The Company shall provide the Holder with prompt written notice of all actions taken pursuant to this Warrant. Without limiting the generality of the foregoing, the Company will give written notice to the Holder as soon as practicable upon each adjustment of the Exercise Price and the number of Warrant Shares, setting forth in reasonable detail, and certifying, the calculation of such adjustment(s). To the extent that any notice provided hereunder (whether under this Section 8 or otherwise) constitutes, or contains, material, non-public information regarding the Company or any of its Subsidiaries, the Company shall simultaneously file such notice with the SEC (as defined in the Securities Purchase Agreement) pursuant to a Current Report on Form 8-K. It is expressly understood and agreed that the time of execution specified by the Holder in each Exercise Notice shall be definitive and may not be disputed or challenged by the Company.

9. **AMENDMENT AND WAIVER.** Except as otherwise provided herein, the provisions of this Warrant (other than Section 1(f)) may be amended and the Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company has obtained the written consent of the Holder. No waiver shall be effective unless it is in writing and signed by an authorized representative of the waiving party.

10. **SEVERABILITY.** If any provision of this Warrant is prohibited by law or otherwise determined to be invalid or unenforceable by a court of competent jurisdiction, the provision that would otherwise be prohibited, invalid or unenforceable shall be deemed amended to apply to the broadest extent that it would be valid and enforceable, and the invalidity or unenforceability of such provision shall not affect the validity of the remaining provisions of this Warrant so long as this Warrant as so modified continues to express, without material change, the original intentions of the parties as to the subject matter hereof and the prohibited nature, invalidity or unenforceability of the provision(s) in question does not substantially impair the respective expectations or reciprocal obligations of the parties or the practical realization of the benefits that would otherwise be conferred upon the parties. The parties will endeavor in good faith negotiations to replace the prohibited, invalid or unenforceable provision(s) with a valid provision(s), the effect of which comes as close as possible to that of the prohibited, invalid or unenforceable provision(s).

11. **GOVERNING LAW.** This Warrant shall be governed by and construed and enforced in accordance with, and all questions concerning the construction, validity, interpretation and performance of this Warrant shall be governed by, the internal laws of the State of New York, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of New York or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of New York. The Company hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in The City of New York, Borough of Manhattan, for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law.

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Nothing contained herein shall be deemed or operate to preclude the Holder from bringing suit or taking other legal action against the Company in any other jurisdiction to collect on the Company's obligations to the Holder or to enforce a judgment or other court ruling in favor of the Holder. **THE COMPANY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE TO, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH OR ARISING OUT OF THIS WARRANT OR ANY TRANSACTION CONTEMPLATED HEREBY.**

12. CONSTRUCTION; HEADINGS. This Warrant shall be deemed to be jointly drafted by the Company and the Holder and shall not be construed against any Person as the drafter hereof. The headings of this Warrant are for convenience of reference and shall not form part of, or affect the interpretation of, this Warrant. Terms used in this Warrant but defined in the other Transaction Documents shall have the meanings ascribed to such terms on the Closing Date (as defined in the Securities Purchase Agreement) in such other Transaction Documents unless otherwise consented to in writing by the Holder.

13. DISPUTE RESOLUTION. In the case of a dispute as to the determination of the Exercise Price, the Exchange Amount, the Exchange Price, the Closing Sale Price, the Closing Bid Price, the Bid Price or fair market value or the arithmetic calculation of the Warrant Shares (as the case may be), the Company or the Holder (as the case may be) shall submit the disputed determinations or arithmetic calculations (as the case may be) via facsimile (i) within two Business Days after receipt of the applicable notice giving rise to such dispute to the Company or the Holder (as the case may be) or (ii) if no notice gave rise to such dispute, at any time after the Holder or the Company (as the case may be) learned of the circumstances giving rise to such dispute. If the Holder and the Company are unable to agree upon such determination or calculation (as the case may be) of the Exercise Price, the Exchange Amount, the Exchange Price, the Closing Sale Price, the Closing Bid Price, the Bid Price or fair market value or the number of Warrant Shares (as the case may be) within three Business Days of such disputed determination or arithmetic calculation being submitted to the Company or the Holder (as the case may be), then the Company shall, within two Business Days submit via facsimile (a) the disputed arithmetic calculation of the Warrant Shares, the disputed determination of the Exercise Price, the Exchange Amount, the Exchange Price, the Closing Sale Price, the Closing Bid Price, the Bid Price or fair market value (as the case may be) to an independent, reputable investment bank selected by the Holder or (b) if acceptable to the Holder, the disputed arithmetic calculation of the Warrant Shares to the Company's independent, outside accountant. The Company shall cause at its expense the investment bank or the accountant (as the case may be) to perform the determinations or calculations (as the case may be) and notify the Company and the Holder of the results no later than ten Business Days from the time it receives such disputed determinations or calculations (as the case may be). Such investment bank's or accountant's determination or calculation (as the case may be) shall be binding upon all parties absent demonstrable error.

14. REMEDIES, CHARACTERIZATION, OTHER OBLIGATIONS, BREACHES AND INJUNCTIVE RELIEF. The remedies provided in this Warrant shall be cumulative and in addition to all other remedies available under this Warrant and the other Transaction Documents, at law or in equity (including a decree of specific performance and/or other injunctive relief), and nothing herein shall limit the right of the Holder to pursue actual and consequential damages for

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any failure by the Company to comply with the terms of this Warrant. The Company covenants to the Holder that there shall be no characterization concerning this instrument other than as expressly provided herein. Amounts set forth or provided for herein with respect to payments, exercises and the like (and the computation thereof) shall be the amounts to be received by the Holder and shall not, except as expressly provided herein, be subject to any other obligation of the Company (or the performance thereof). The Company acknowledges that a breach by it of its obligations hereunder will cause irreparable harm to the Holder and that the remedy at law for any such breach may be inadequate. The Company therefore agrees that, in the event of any such breach or threatened breach, the holder of this Warrant may be entitled, in addition to all other available remedies, to an injunction restraining any breach, without the necessity of showing economic loss and without any bond or other security being required. Except where such information and documentation contains or would otherwise constitute material, non-public information, the Company shall provide all information and documentation to the Holder that is requested by the Holder to enable the Holder to confirm the Company's compliance with the terms and conditions of this Warrant (including, without limitation, compliance with Section 2 hereof). The issuance of shares and certificates for shares as contemplated hereby upon the exercise of this Warrant shall be made without charge to the Holder of such shares for any issuance tax or other costs in respect thereof, provided that the Company shall not be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of any certificate in a name other than the Holder or its agent on its behalf.

15. TRANSFER. This Warrant may be offered for sale, sold, transferred or assigned without the consent of the Company.

16. CERTAIN DEFINITIONS. For purposes of this Warrant the following terms shall have the following meanings:

(a) "**Bid Price**" means, for any security as of the particular time of determination, the bid price for such security on the Principal Market as reported by Bloomberg as of such time of determination, or, if the Principal Market is not the principal securities exchange or trading market for such security, the bid price of such security on the principal securities exchange or trading market where such security is listed or traded as reported by Bloomberg as of such time of determination, or if the foregoing does not apply, the bid price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg as of such time of determination, or, if no bid price is reported for such security by Bloomberg as of such time of determination, the average of the bid prices of all of the market makers for such security as reported in the "pink sheets" by OTC Markets Group Inc. (formerly Pink Sheets LLC) (the "**Pink Sheets**") as of such time of determination. If the Bid Price cannot be calculated for a security as of the particular time of determination on any of the foregoing bases, the Bid Price of such security as of such time of determination shall be the fair market value as mutually determined by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then such dispute shall be resolved in accordance with the procedures in Section 13. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during such period.

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(b) “**Black Scholes Exchange Value**” means the value of an option for the number of shares equal to the portion of the Warrant being exchanged at the applicable Exchange Date as set forth in the applicable Exchange Notice as such value is determined calculated using the Black Scholes Option Pricing Model obtained from the “OV” function on Bloomberg utilizing (i) an underlying price per share equal to the Closing Sale Price of the Common Stock as of the Issuance Date (adjusted upward to the same extent that the Exercise Price hereunder has been adjusted upward pursuant to Section 2(a)), (ii) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the remaining term of the Warrant as of such Exchange Date, (iii) a strike price equal to the Exercise Price in effect at the time of the applicable Exchange, (iv) an expected volatility equal to 135% and (v) a deemed remaining term of the Warrant of five years (regardless of the actual remaining term of the Warrant).

(c) “**Black Scholes Value-FT**” means the value of the unexercised portion of this Warrant remaining on the date of the Holder’s request pursuant to Section 3(b), which value is calculated using the Black Scholes Option Pricing Model obtained from the “OV” function on Bloomberg utilizing (i) an underlying price per share equal to the greater of (1) the highest Closing Sale Price of the Common Stock during the period beginning on the Trading Day immediately preceding the earliest to occur of (x) the public disclosure of the applicable Fundamental Transaction, (y) the consummation of the applicable Fundamental Transaction and (z) the date on which the Holder first became aware of the applicable Fundamental Transaction and ending on the Trading Day of the Holder’s request pursuant to Section 3(b) and (2) the sum of the price per share being offered in cash in the applicable Fundamental Transaction (if any) plus the value of the non-cash consideration being offered in the applicable Fundamental Transaction (if any), (ii) a strike price equal to the Exercise Price in effect on the date of the Holder’s request pursuant to Section 3(b), (iii) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the greater of (1) the remaining term of this Warrant as of the date of the Holder’s request pursuant to Section 3(b) and (2) the remaining term of this Warrant as of the date of consummation of the applicable Fundamental Transaction or as of the date of the Holder’s request pursuant to Section 3(b) if such request is prior to the date of the consummation of the applicable Fundamental Transaction and (iv) an expected volatility equal to 135%.

(d) “**Bloomberg**” means Bloomberg, L.P.

(e) “**Business Day**” means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed.

(f) “**Closing Bid Price**” and “**Closing Sale Price**” means, for any security as of any date, the last closing bid price and the last closing trade price, respectively, for such security on the Principal Market, as reported by Bloomberg, or, if the Principal Market begins to operate on an extended hours basis and does not designate the closing bid price or the closing trade price (as the case may be) then the last bid price or last trade price, respectively, of such security prior to 4:00:00 p.m., New York time, as reported by Bloomberg, or, if the Principal Market is not the principal securities exchange or trading market for such security, the last closing bid price or last trade price, respectively, of such security on the principal securities exchange or trading market where such security is listed or traded as reported by Bloomberg, or if the foregoing do not

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apply, the last closing bid price or last trade price, respectively, of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg, or, if no closing bid price or last trade price, respectively, is reported for such security by Bloomberg, the average of the bid prices, or the ask prices, respectively, of all of the market makers for such security as reported in the Pink Sheets. If the Closing Bid Price or the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Bid Price or the Closing Sale Price (as the case may be) of such security on such date shall be the fair market value as mutually determined by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then such dispute shall be resolved in accordance with the procedures in Section 13. All such determinations shall be appropriately adjusted in accordance with Section 2 for any stock dividend, stock split, stock combination or other similar transaction during such period.

(g) “**Common Stock**” means (i) the Company’s shares of common stock, \$0.02 par value per share, and (ii) any capital stock into which such common stock shall have been changed or any share capital resulting from a reclassification of such common stock.

(h) “**Convertible Securities**” means any stock or other security (other than Options) that is at any time and under any circumstances, directly or indirectly, convertible into, exercisable or exchangeable for, or which otherwise entitles the holder thereof to acquire, any shares of Common Stock.

(i) “**Eligible Market**” means the Principal Market, OTC Bulletin Board, the OTCQX or OTCQB tiers of the OTC Markets Group, Inc., the New York Stock Exchange, the Nasdaq Global Select Market, the Nasdaq Global Market, and the NYSE MKT.

(j) “**Equity Conditions**” means: (i) the Company shall have complied in all material respects with all applicable securities laws and regulations and all rules and regulations of the Eligible Markets in respect of the offer, sale and issuance of the Securities under the Transaction Documents, (ii) the Common Stock (including all shares of Common Stock to be received by Holder) shall be listed or designated for quotation (as applicable) on an Eligible Market and no Trading Market Event (or event which with notice or passage of time would be a Trading Market Event) has occurred, nor shall delisting or suspension by an Eligible Market be pending or threatened and still pending, (iii) the Company shall be in compliance in all material respects with all of its obligations under all of the Transaction Documents, (iv) no public announcement of a pending, proposed or intended Fundamental Transaction shall have occurred which has not been abandoned, terminated or consummated, (v) the Holder shall not be in possession of any material, non-public information provided to it by the Company, any the Company’s Affiliates or any of their respective officers, employees, directors, representatives, agents or the like, (vi) (A) each of the Registration Statement and the Prospectus contained therein (each as defined in the Securities Purchase Agreement) shall continue to be effective and fully available for use with respect to issuance of all of the Securities, including, without limitation, any issuance of Warrant Shares pursuant to a cash exercise hereof, including without limitation a Mandatory Exercise under Section 17, (B) all Common Shares and Warrant Shares (including any Warrant Shares to be received upon exercise or exchange of this Warrant and including any Warrant Shares to be issued in a cash exercise) shall be then (or upon such issuance (as the case may be)) freely tradeable by Holder without restriction of any kind or nature (and the Company shall have no

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knowledge of any fact which would reasonably be expected to negate the foregoing in the foreseeable future), (C) no limitation shall be applicable with respect to the issuance of any Warrant Shares hereunder (other than under Section 1(f)), and (D) the Company is fully reporting under the 1934 Act, and (vii) all Common Shares and all Warrant Shares required to be delivered shall have been properly and timely delivered under the Securities Purchase Agreement and this Warrant, including without limitation, all Warrant Shares issuable under Section 4 hereof and all Common Shares and Warrant Shares have been, and will be, delivered via DWAC. For purposes hereof a “**Trading Market Event**” shall mean if the Company or the Common Stock or any shares of Common Stock issued or issuable hereunder or under any other Transaction Document shall cease or fail to be listed for trading or quoted on an Eligible Market or shall fall below any dollar threshold for listing or qualification or the Company shall then not be in compliance with any applicable listing or qualification standard (or will, with the passage of time, so cease and fail).

(k) “**Equity Conditions Failure**” means that on any applicable date of determination, any of the Equity Conditions have not been satisfied then. Except with respect to the events set forth in clauses (ii), (v), (vi), (vii) and (viii) in the definition of Equity Conditions, an Equity Conditions Failure shall not have occurred if the event, fact or circumstance causing an Equity Condition not to be satisfied arises due to, or at the instruction of, the Holder (including, without limitation, any action taken by the Company in accordance with the Transaction Documents).

(l) “**Expiration Date**” means the date that is the fifth anniversary of the Issuance Date or, if such date falls on a day other than a Business Day or on which trading does not take place on the Principal Market (a “**Holiday**”), the next date that is not a Holiday.

(m) “**Options**” means any rights, warrants or options to subscribe for or purchase shares of Common Stock or Convertible Securities.

(n) “**Person**” means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, any other entity or a government or any department or agency thereof.

(o) “**Principal Market**” means the Nasdaq Capital Market.

(p) “**Trading Day**” means, as applicable, (x) with respect to all price determinations relating to the Common Stock, any day on which the Common Stock is traded on the Principal Market, or, if the Principal Market is not the principal trading market for the Common Stock, then on the principal securities exchange or securities market on which the Common Stock is then traded, provided that “Trading Day” shall not include any day on which the Common Stock is scheduled to trade on such exchange or market for less than 4.5 hours or any day that the Common Stock is suspended from trading during the final hour of trading on such exchange or market (or if such exchange or market does not designate in advance the closing time of trading on such exchange or market, then during the hour ending at 4:00:00 p.m., New York time) unless such day is otherwise designated as a Trading Day in writing by the Holder or (y) with respect to all determinations other than price determinations relating to the Common Stock, any day on which The New York Stock Exchange (or any successor thereto) is open for trading of securities.

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(q) “**Voting Stock**” of a Person means capital stock of such Person of the class or classes pursuant to which the holders thereof have the general voting power to elect, or the general power to appoint, at least a majority of the board of directors, managers or trustees of such Person (irrespective of whether or not at the time capital stock of any other class or classes shall have or might have voting power by reason of the happening of any contingency).

(r) “**VWAP**” means, for any security as of any date, the dollar volume-weighted average price for such security on the Principal Market (or, if the Principal Market is not the principal trading market for such security, then on the principal securities exchange or securities market on which such security is then traded) during the period beginning at 9:30:01 a.m., New York time, and ending at 4:00:00 p.m., New York time, as reported by Bloomberg through its “Volume at Price” function or, if the foregoing does not apply, the dollar volume-weighted average price of such security in the over-the-counter market on the electronic bulletin board for such security during the period beginning at 9:30:01 a.m., New York time, and ending at 4:00:00 p.m., New York time, as reported by Bloomberg, or, if no dollar volume-weighted average price is reported for such security by Bloomberg for such hours, the average of the three highest closing bid prices and the three lowest closing ask prices of all of the market makers for such security as reported in the Pink Sheets. If VWAP cannot be calculated for such security on such date on any of the foregoing bases, the VWAP of such security on such date shall be the fair market value as mutually determined by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then such dispute shall be resolved in accordance with the procedures in Section 13. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during such period.

17. MANDATORY EXERCISE. If at any time after the date of issuance of this Warrant, for twenty (20) consecutive Trading Days the Closing Bid Price of the Common Stock for each Trading Day during such period is at a price greater than or equal to twenty-five percent (25%) above the Exercise Price as in effect at the end of such Trading Day, and the average daily dollar volume during such twenty (20) consecutive Trading Days is equal to or exceeds \$300,000 (such period being the “**Trigger Period**”), then (provided no Equity Conditions Failure shall have occurred and is continuing through the end of such period), the Company shall have the right to require the Holder to exercise for cash all, but not less than all, of this Warrant for all of the then-remaining Warrant Shares as further set forth below. The Company may exercise its right to require exercise under this Section 17 (the “**Mandatory Exercise Right**”) (to the extent permitted hereby) by delivering, within 10 Trading Days following the end of the Trigger Period, a written notice thereof by facsimile and overnight courier to the Holder (the “**Mandatory Exercise Notice**” and the date such notice by facsimile is deemed to be delivered in accordance with Section 8 is referred to as the “**Mandatory Exercise Notice Date**”). The Mandatory Exercise Notice shall be irrevocable. The Mandatory Exercise Notice shall (1) state the Trading Day selected for the Mandatory Exercise in accordance with this Section 17, which Trading Day shall be at least five Trading Days but not more than 15 Trading Days following the Mandatory Exercise Notice Date (the “**Mandatory Exercise Date**”), (2) state the number of shares of Common Stock to be issued to the Holder on the Mandatory Exercise Date and (3) contain a certification from the Chief Executive Officer of the Company that there has been no Equity Conditions Failure as of the Mandatory Exercise Notice Date. Any portion of this Warrant exercised by the Holder after the Mandatory Exercise Notice Date shall reduce the number of

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Warrant Shares for which this Warrant is required to be exercised on the Mandatory Exercise Date. If the Company has elected a Mandatory Exercise, the mechanics of exercise set forth in Section 1 shall apply, to the extent applicable, as if the Company had received from the Holder on the Mandatory Exercise Date an Exercise Notice with respect to all of the then-remaining Warrant Shares (or the Permitted Exercise Amount (as defined below) of Warrant Shares, as applicable). Notwithstanding anything contained in this Section 17 to the contrary (but subject to the last sentence of this Section 17), if (I) the Closing Bid Price of the Common Stock on any Trading Day during the period commencing on the Mandatory Exercise Notice Date and ending on the Trading Day immediately preceding the Mandatory Exercise Date is less than the Exercise Price then in effect at the end of trading on such day; (II) the daily dollar trading volume (as reported on Bloomberg) of the Common Stock on the applicable Eligible Market on any Trading Day during the period commencing on the Mandatory Exercise Notice Date and ending on the Trading Day immediately preceding the Mandatory Exercise Date is less than \$300,000; or (III) an Equity Conditions Failure occurs on any day since the occurrence of the Trigger Period and is continuing on the Mandatory Exercise Date, then the Mandatory Exercise Notice delivered to the Holder shall be null and void ab initio and the Mandatory Exercise shall not occur and the Mandatory Exercise Right shall not be available to the Company unless and until the conditions precedent to such Mandatory Exercise Right are again satisfied. If the Company elects to cause a mandatory exercise of this Warrant pursuant to this Section 17, then it must simultaneously take the same action with respect to all of the other Warrants, if any, held by any person other than Holder. Notwithstanding anything contained in this Section 17 to the contrary, an effort by the Company to exercise its right under this Section 17 shall be stayed to the extent the Holder delivers a written notice to the Company stating that such exercise would result in a violation of Section 1(f) (a “**Blocker Notice**”), which Blocker Notice may be delivered at any time prior to the Mandatory Exercise Date, in which case the Company shall have the right to require the Holder to exercise this Warrant for such number of Warrant Shares that may be exercise hereunder without violating Section 1(f) (the “**Permitted Exercise Amount**”) and from time to time thereafter the Holder shall exercise this Warrant (so long as no Equity Conditions Failure has occurred from and after the Mandatory Exercise Notice Date) in such amounts and from time to time until fully exercised, subject to ongoing compliance with Section 1(f) and subject to Holder’s rights hereunder and the other terms and conditions hereof following the Mandatory Exercise Date.

*[signature page follows]*

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The Company has caused this Warrant to Purchase Common Stock to be duly executed as of the Issuance Date set out above.

**QUANTUM FUEL SYSTEMS TECHNOLOGIES  
WORLDWIDE, INC.**

By: /s/ Bradley J. Timon

Name: Bradley J. Timon

Title: Chief Financial Officer

*Signature Page to Warrant*

EXERCISE NOTICE

TO BE EXECUTED BY THE REGISTERED HOLDER TO EXERCISE THIS  
WARRANT TO PURCHASE COMMON STOCK

QUANTUM FUEL SYSTEMS TECHNOLOGIES WORLDWIDE, INC.

The undersigned holder hereby exercises the right to purchase \_\_\_\_\_ of the shares of Common Stock ("*Warrant Shares*") of Quantum Fuel Systems Technologies Worldwide, Inc., a Delaware corporation (the "*Company*") evidenced by Warrant to Purchase Common Stock No. \_\_\_\_\_ (the "*Warrant*"), Capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Warrant,

1. Form of Exercise Price. The Holder intends that payment of the Exercise Price shall be made as:

\_\_\_\_\_ a "Cash Exercise" with respect to \_\_\_\_\_ Warrant Shares; and/or

\_\_\_\_\_ a "Cashless Exercise" with respect to \_\_\_\_\_ Warrant Shares.

In the event that the Holder has elected a Cashless Exercise with respect to some or all of the Warrant Shares to be issued pursuant hereto, the Holder hereby represents and warrants that this Exercise Notice was executed by the Holder at \_\_\_\_\_ [a.m.][p.m.] on the date set forth below and (ii) if applicable, the Bid Price as of such time of execution of this Exercise Notice was \$\_\_\_\_\_.

2. Payment of Exercise Price. In the event that the Holder has elected a Cash Exercise with respect to some or all of the Warrant Shares, the Holder shall pay the Aggregate Exercise Price in the sum of \$\_\_\_\_\_ to the Company in accordance with the terms of the Warrant.

3. Delivery of Warrant Shares and Net Number of Shares of Common Stock. The Company shall deliver to Holder, or its designee or agent as specified below, \_\_\_\_\_ shares of Common Stock in respect of the exercise contemplated hereby. Delivery shall be made to Holder, or for its benefit, to the following address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date: \_\_\_\_\_, \_\_\_\_\_

\_\_\_\_\_  
Name of Registered Holder

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By: \_\_\_\_\_

Name:

Title:

Account Number: \_\_\_\_\_

(if electronic book entry transfer)

Transaction Code Number: \_\_\_\_\_

(if electronic book entry transfer)

**EXHIBIT B**

**EXCHANGE NOTICE**

**TO BE EXECUTED BY THE REGISTERED HOLDER TO EXCHANGE THIS  
WARRANT TO PURCHASE COMMON STOCK**

**QUANTUM FUEL SYSTEMS TECHNOLOGIES WORLDWIDE, INC.**

The undersigned holder hereby exercises the right to exchange the Warrant to Purchase Common Stock No. \_\_\_\_\_ (the "Warrant") of Quantum Fuel Systems Technologies Worldwide, Inc., a Delaware corporation (the "Company") as described. Capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Warrant.

**Date of Exchange:** \_\_\_\_\_

1. The total number of shares with respect to which this Warrant is being exchanged: \_\_\_\_\_
2. Black Scholes Exchange Value (as defined in Section 16) for an option to purchase \_\_\_\_\_ [SAME # AS FROM 1 ABOVE] shares of Common Stock: \$\_\_\_\_\_.

**Resulting Exchange Amount:** \$\_\_\_\_\_ [insert from item 2 above]

3. **Exchange Price:** Closing Bid Price of the Common Stock as of two (2) Trading Days prior to the date of Exchange (as such Closing Bid Price is defined in Section 17 herein): \$\_\_\_\_\_.

**Resulting Exchange Number [Exchange Amount/Exchange Price as set forth in 3 above] (if issuer is permitted to elect to issue shares of Common Stock):** \_\_\_\_\_ shares of Common Stock

Account for Wire Transfer: \_\_\_\_\_

Account for Share issuance (if Company is permitted to elect and so elects): \_\_\_\_\_

Date: \_\_\_\_\_, \_\_\_\_\_

\_\_\_\_\_  
Name of Registered Holder

By: \_\_\_\_\_

Name:

Title:

**ACKNOWLEDGMENT**

The Company hereby acknowledges the receipt of the [Exercise Notice and Aggregate Exercise Price][Exchange Notice) and hereby directs \_\_\_\_\_ to issue the above indicated number of shares of Common Stock in accordance with the Transfer Agent Instructions dated \_\_\_\_\_20\_\_, from the Company and acknowledged and agreed to by \_\_\_\_\_.

**QUANTUM FUEL SYSTEMS  
TECHNOLOGIES WORLDWIDE, INC.**

By: \_\_\_\_\_

Name: \_\_\_\_\_

\_\_\_\_\_  
Title: \_\_\_\_\_

\_\_\_\_\_

May 16, 2013

Board of Directors  
Quantum Fuel Systems Technologies Worldwide, Inc.  
25242 Arctic Ocean Drive  
Lake Forest, California 92630

Re: Registration Statement on Form S-3

Gentlemen:

I am the General Counsel, Vice President-Legal and Corporate Secretary of Quantum Fuel Systems Technologies Worldwide, Inc., a Delaware corporation (the "Company"), and, in that capacity, I have acted as counsel to the Company in connection with the preparation and filing of a Registration Statement on Form S-3 (Registration No. 333-176772) filed by the Company with the Securities and Exchange Commission (the "Commission") pursuant to the Securities Act of 1933, as amended, which was declared effective by the Commission on September 29, 2011 (the "Registration Statement") and included a base prospectus (the "Base Prospectus") and a prospectus supplement, dated May 16, 2013 (the "Prospectus Supplement") (together with the Base Prospectus, the "Prospectus").

The Prospectus pertains to the proposed offer and sale by the Company of 4,918,032 shares of common stock, \$0.02 par value per share (the "Common Stock"), and a warrant to purchase up to 2,950,819 shares of Common Stock (the "Warrants"). The Prospectus also covers 5,446,330 shares of Common Stock issuable from time to time upon exercise of the Warrants (collectively, the "Warrant Shares").

This opinion letter is being furnished in accordance with the requirements of Item 601(b)(5)(i) of Regulation S-K.

In preparation of this opinion letter, I have reviewed the Amended and Restated Certificate of Incorporation, as amended, of the Company; the Amended and Restated By-laws, as amended, of the Company; the Securities Purchase Agreement (the "Securities Purchase Agreement") dated the date hereof by and between the Company and the purchaser of the securities named therein (the "Purchaser") and the Warrant issued by the Company to the Purchaser dated the date hereof; minutes of meetings and actions of the Board of Directors of the Company (the "Board"), and such other documents deemed relevant.

I have examined and I am familiar with originals, or copies certified or otherwise identified to my satisfaction, of such corporate records of the Company, certificates or documents as I have deemed appropriate as a basis for the opinions expressed below. In such examination, I have assumed the legal capacity of all natural persons, the genuineness of all signatures, the authenticity of all documents submitted to me as originals, the conformity to original documents of all documents submitted to me as

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certified or photostatic copies, and the authenticity of the originals of such copies. I have also assumed that any documents not yet executed will be duly executed in form(s) duly authorized and established in accordance with the action of the Board or a duly authorized committee of the Board.

Based upon the foregoing and subject to the assumptions, qualifications and limitations set forth herein, I am of the opinion that:

1. the issuance and sale of the Common Stock and Warrants included therein, has been duly authorized and, when issued and sold in the manner described in the Registration Statement and the Prospectus and the Securities Purchase Agreement, the Common Stock and the Warrants included therein, will be validly issued, fully paid and non-assessable; and

2. the Warrant Shares have been duly authorized and, when issued in the manner described in the Registration Statement and the Prospectus and in accordance with the terms and conditions of the Warrant (including the due payment of any exercise price therefor specified in the Warrants), the Warrant Shares will be validly issued, fully paid and non-assessable.

My opinion is limited to the federal laws of the United States and the General Corporation Law of the State of Delaware.

My opinion is as of the date hereof and I have no responsibility to update this opinion for events and circumstances occurring after the date hereof or as to facts relating to prior events that are subsequently brought to my attention and I disavow any undertaking to advise you of any changes in law.

My opinion letter is furnished to you in connection with the filing of the Registration Statement and the Prospectus and is not to be used, circulated, quoted or otherwise relied upon for any other purpose.

This opinion letter has been prepared for use in connection with the filing by the Company of a Current Report on Form 8-K relating to the offer and sale of the Common Stock and the Warrants, which Form 8-K will be incorporated by reference into the Registration Statement and Prospectus. I hereby consent to the filing of this opinion letter as Exhibit 5.1 to the above-described Current Report on Form 8-K and to the reference to my name under the caption "Legal Matters" in the Prospectus constituting a part of the Registration Statement.

[signature on the following page]

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Sincerely,

/s/ Kenneth R. Lombardo

Kenneth R. Lombardo  
General Counsel, Vice President-Legal and  
Corporate Secretary

## EXECUTION VERSION

## SECURITIES PURCHASE AGREEMENT

This Securities Purchase Agreement (the “*Agreement*”), dated as of May 16, 2013, is by and among Quantum Fuel Systems Technologies Worldwide, Inc., a Delaware corporation with offices located at 25242 Arctic Ocean Drive, Lake Forest, California 92630 (the “*Company*”), and Crede CG III, Ltd., a Bermuda company (the “*Buyer*”).

BACKGROUND

The Company and the Buyer desire to enter into this transaction to purchase the Common Shares and Warrants set forth herein pursuant to a Registration Statement on Form S-3 (Registration Number 333-176772), which provides for the registration of an offering of shares of the Company’s common stock, \$0.02 par value per share, (the “*Common Stock*”), and warrants to purchase shares of such Common Stock (the “*Registration Statement*”), which Registration Statement has been declared effective in accordance with the Securities Act of 1933, as amended (the “*1933 Act*”), by the United States Securities and Exchange Commission (the “*SEC*”).

In the United States, the Common Stock is listed on the Nasdaq Capital Market (the “*Principal Market*”) and trades under the ticker symbol QTWW.

The parties hereto each understand that this Securities Purchase Agreement and the purchase and sale contemplated hereby is unconditional and binding on the parties hereto.

TERMS

Now, therefore, in consideration of the premises and the mutual covenants contained herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Company and the Buyer hereby agree as follows:

**1. PURCHASE AND SALE OF COMMON SHARES AND WARRANTS.**

(a) Common Shares and Warrants. The Company shall issue and sell to the Buyer, and the Buyer shall purchase from the Company on the Closing Date, 4,918,032 shares of Common Stock (the “*Common Shares*”), along with one or more warrants, substantially in form of Warrant to Purchase Common Stock attached hereto as Exhibit A, to purchase that number of shares of Common Stock indicated therein (the “*Warrants*” and all shares of Common Stock acquirable upon exercise or exchange of the Warrants, collectively, the “*Warrant Shares*”). The Common Shares, the Warrants and the Warrant Shares are collectively referred to herein as the “*Securities*.” The initial number of Warrant Shares set forth above shall be equal to 60% of the aggregate Purchase Price (as defined in the Securities Purchase Agreement) divided by the Purchase Price per share. In the event that the Common Stock is delisted from the Principal Market (as defined in the Securities Purchase Agreement), the warrant coverage under this Warrant will automatically increase, immediately upon such delisting, with no further action required by either party, to 70% of the aggregate Purchase Price divided by the Purchase Price per share.

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(b) Closing. The closing and settlement (the “**Closing**”) of the purchase of the Common Shares and the Warrants by the Buyer shall occur at the offices of Dentons US LLP, 1221 Avenue of the Americas, New York, New York 10020-1089 on the date hereof and shall occur at 10:00 a.m. (or such earlier time as agreed to by the parties), New York time (the “**Closing Date**”). As used herein “**Business Day**” means any day other than a Saturday, Sunday or other day on which commercial banks in New York, New York are authorized or required by law to remain closed.

(c) Purchase Price. The Purchase Price per share shall equal the consolidated Closing Bid Price on the Trading Day immediately prior to the date of the public announcement of the transaction. The aggregate purchase price for the Common Shares to be purchased by the Buyer (the “**Purchase Price**”) shall be Three Million Dollars (\$3,000,000.00).

(d) Form of Payment; Deliveries. On the Closing Date, (i) the Buyer shall pay the Purchase Price to the Company (less amounts, if any, withheld pursuant to Section 4(e) hereof), by wire transfer of immediately available funds in accordance with the Company’s written wire instructions and (ii) the Company shall (A) cause Broadridge Corporate Issuer Solutions, Inc. (together with any subsequent transfer agent, the “**Transfer Agent**”) through the Depository Trust Company (“**DTC**”) Fast Automated Securities Transfer Program to credit, without restriction, to the Buyer’s or its designee’s balance account with DTC through its Deposit/Withdrawal at Custodian (“**DWAC**”) system the aggregate number of Common Shares that the Buyer is purchasing, (B) deliver to the Buyer a Warrant, pursuant to which the Buyer shall have the right to initially acquire up to the number of Warrant Shares as is set forth therein, and (C) deliver to the Buyer each of the other documents, instruments and certificates set forth in Section 6.

## 2. BUYER’S REPRESENTATIONS AND WARRANTIES.

The Buyer hereby represents and warrants, and where applicable hereby covenants, to the Company that:

(a) Organization; Authority. The Buyer is an entity duly organized, validly existing and in good standing under the laws of the jurisdiction of its organization with the requisite power and authority to enter into and to consummate the transactions contemplated by the Transaction Documents to which it is a party and otherwise to carry out its obligations hereunder and thereunder.

(b) Validity; Enforcement. This Agreement has been duly and validly authorized, executed and delivered on behalf of the Buyer and constitutes the legal, valid and binding obligations of the Buyer enforceable against the Buyer in accordance with its terms, except as such enforceability may be limited by general principles of equity or to applicable bankruptcy, insolvency, reorganization, moratorium, liquidation and other similar laws relating to, or affecting generally, the enforcement of applicable creditors’ rights and remedies.

(c) No Conflicts. The execution, delivery and performance by the Buyer of this Agreement and the consummation by the Buyer of the transactions contemplated hereby will not (i) result in a violation of the organizational documents of the Buyer or (ii) conflict with, or

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constitute a default (or an event which with notice or lapse of time or both would become a default) under, or give to others any rights of termination, amendment, acceleration or cancellation of, any agreement, indenture or instrument to which the Buyer is a party, or (iii) result in a violation of any law, rule, regulation, order, judgment or decree (including federal and state securities laws) applicable to the Buyer, except in the case of clauses (ii) and (iii) above, for such conflicts, defaults, rights or violations which would not, individually or in the aggregate, reasonably be expected to have a material adverse effect on the ability of the Buyer to perform its obligations hereunder.

(d) Certain Trading Activities. As of the Closing Date and prior to issuance of the Common Stock and the Warrant, the Buyer does not beneficially own (within the meaning of Section 13(d) of the 1934 Act and the rules and regulations thereunder) any outstanding securities of the Company. The Buyer has not directly or indirectly, nor has any Person acting on behalf of or pursuant to any understanding with the Buyer, engaged in any transactions in the securities of the Company (including, without limitation, any Short Sales involving the Company's securities) during the period commencing as of the time that the Buyer and the Company (or the Placement Agent if any) first began discussions regarding the specific investment in the Company contemplated by this Agreement and ending immediately prior to the execution of this Agreement by the Buyer (it being understood and agreed that for all purposes of this Agreement, and, without implication that the contrary would otherwise be true, that neither transactions nor purchases nor sales shall include the location and/or reservation of borrowable shares of Common Stock). "**Short Sales**" means all "short sales" as defined in Rule 200 promulgated under Regulation SHO under the 1934 Act. "**Person**" means any person or entity, whether an individual, trustee, corporation, partnership, limited partnership, limited liability company, trust, unincorporated organization, business association, firm, joint venture or governmental entity.

(e) Investment decision. The Buyer has based its investment decision solely upon the information contained in the Transaction Documents, the SEC Documents, such information as may be filed by the Company as a "Free Writing Prospectus" under the 1933 Act, and such other information as may have been provided to the Buyer by the Company in response to its inquiries, and has not based its investment decision on any research report or other information regarding the Company. The Buyer further acknowledges that (i) the purchase of the Securities involves a degree of risk and (ii) the offer contained in the Transaction Documents does not constitute a securities recommendation or other form of financial product advice.

### **3. REPRESENTATIONS AND WARRANTIES OF THE COMPANY.**

The Company represents and warrants to the Buyer and the Placement Agent (as hereinafter defined) that, except as may be set forth in the SEC Documents with respect to specific representations and warranties to the extent expressly set forth in such representations and warranties, as of the date of this Agreement (unless such representation and warranty specifies a different time):

(a) Organization and Qualification. Each of the Company and each of its Subsidiaries are entities duly organized or incorporated (as applicable), validly existing as a corporation and in good standing (where applicable) under the laws of the jurisdiction in which

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they are formed or incorporated (as applicable), and have the requisite power and authorization to own their properties and to carry on their business as now being conducted and as presently proposed to be conducted. Each of the Company and each of its Subsidiaries is duly qualified as a foreign entity (where applicable) to do business and is in good standing (where applicable) in every jurisdiction in which its ownership of property or the nature of the business conducted by it makes such qualification necessary, except to the extent that the failure to be so qualified or be in good standing would not have a Material Adverse Effect. As used in this Agreement, “**Material Adverse Effect**” means any material adverse effect on (i) the business, properties, assets, liabilities, operations (including results thereof), condition (financial or otherwise) or prospects of the Company or any Subsidiary, individually or taken as a whole, (ii) the transactions contemplated hereby or in any of the other Transaction Documents or (iii) the authority or ability of the Company to perform any of its obligations under any of the Transaction Documents. “**Subsidiaries**” means a Significant Subsidiary as that term is defined in Rule 405 of the 1933 Act, and each of the foregoing is individually referred to herein as a “**Subsidiary**.”

(b) Authorization; Enforcement; Validity. The Company has the requisite power and authority to enter into and perform its obligations under this Agreement and the other Transaction Documents and to issue the Securities in accordance with the terms hereof and thereof. The execution and delivery of this Agreement and the other Transaction Documents by the Company and the consummation by the Company of the transactions contemplated hereby and thereby (including, without limitation, the issuance of the Common Shares, the issuance of the Warrants and the reservation for issuance and issuance of the Warrant Shares issuable upon exercise of the Warrants) have been duly authorized by the Company’s board of directors and (other than the filing with the SEC of the prospectus supplement required by the Registration Statement pursuant to Rule 424(b) under the 1933 Act (the “**Prospectus Supplement**”) supplementing the base prospectus forming part of the Registration Statement (the “**Prospectus**”) and any other filings as may be required by the Principal Market and/or any state securities agencies, all of which shall be made prior to the Closing) no further filing, consent or authorization is required by the Company, its board of directors or its stockholders or other governing body. This Agreement has been, and the other Transaction Documents will be prior to the Closing, duly executed and delivered by the Company, and each constitutes the legal, valid and binding obligations of the Company, enforceable against the Company in accordance with its respective terms, except as such enforceability may be limited by general principles of equity or applicable bankruptcy, insolvency, reorganization, moratorium, liquidation or similar laws relating to, or affecting generally, the enforcement of applicable creditors’ rights and remedies and except as rights to indemnification and to contribution may be limited by federal or state securities law. “**Transaction Documents**” means, collectively, this Agreement, the Warrants, the Irrevocable Transfer Agent Instructions and each of the other agreements and instruments entered into or delivered by any of the parties hereto in connection with the transactions contemplated hereby and thereby, as may be amended from time to time.

(c) Issuance of Securities; Registration Statement. The issuance of the Common Shares and the Warrants has been duly authorized by all requisite corporate action of the Company and, upon issuance in accordance with the terms of the Transaction Documents, the Common Shares will be validly issued, fully paid and non-assessable and free from all preemptive or similar rights, taxes, liens, charges and other encumbrances. As of the Closing, the Company shall have reserved from its duly authorized capital stock the maximum number of

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shares of Common Stock issuable upon exercise of the Warrants (without taking into account any beneficial ownership limitations on the exercise of the Warrants set forth therein). The issuance of the Warrant Shares has been duly authorized by all requisite corporate action of the Company, and upon exercise in accordance with the Warrants, the Warrant Shares, when issued, will be validly issued, fully paid and non-assessable and free from all preemptive or similar rights, taxes, liens, charges and other encumbrances, with the holders of the Warrant Shares being entitled to all rights accorded to a holder of Common Stock. The issuance by the Company of the Securities has been registered under the 1933 Act and the Securities are being issued pursuant to the Registration Statement and all of the Securities are freely transferable and freely tradable by Buyer without restrictions. The Registration Statement is effective and available for the issuance of the Securities thereunder and the Company has not received any notice that the SEC has issued or intends to issue a stop-order with respect to the Registration Statement or that the SEC otherwise has suspended or withdrawn the effectiveness of the Registration Statement, either temporarily or permanently, or intends or has threatened in writing to do so. The “Plan of Distribution” section under the Registration Statement permits the issuance and sale of the Securities hereunder and as contemplated by the other Transaction Documents. The Registration Statement and any prospectus included therein, including the Prospectus and the Prospectus Supplement, comply and complied in all material respects with the requirements of the 1933 Act and the 1934 Act and the rules and regulations of the SEC promulgated thereunder and all other applicable laws and regulations of the United States. At the time the Registration Statement and any amendments thereto became effective, at the date of this Agreement and at each deemed effective date thereof pursuant to Rule 430B(f)(2) of the 1933 Act, the Registration Statement and any amendments thereto complied and will comply in all material respects with the requirements of the 1933 Act and did not and will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading; and the Prospectus and any amendments or supplements thereto (including, without limitation the Prospectus Supplement), at the time the Prospectus or any amendment or supplement thereto was issued and at the Closing Date, complied and will comply in all material respects with the requirements of the 1933 Act and did not and will not contain an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. The Company meets all of the requirements for the use of Form S-3 under the 1933 Act for the offering and sale of the Securities contemplated by this Agreement and the other Transaction Documents, and the SEC has not notified the Company of any objection to the use of the form of the Registration Statement pursuant to Rule 401(g)(1) under the 1933 Act. The Registration Statement meets the requirements set forth in Rule 415(a)(1)(x) under the 1933 Act. At the earliest time after the filing of the Registration Statement that the Company or another offering participant made a bona fide offer (within the meaning of Rule 164(h)(2) under the 1933 Act) relating to any of the Securities, the Company was not and is not an “Ineligible Issuer” (as defined in Rule 405 under the 1933 Act). The Company (i) has not distributed any offering material in connection with the offering and sale of any of the Securities and (ii) until the Buyer holds none of the Securities, shall not distribute any offering material in connection with the offering and sale of any of the Securities to, or by, the Buyer, in each case, other than the Registration Statement, the Prospectus or the Prospectus Supplement. Further, the Company will not distribute any offering material in connection with the offering and sale of any

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Securities in any place in which, or to any Person to whom, it would not be lawful to make such an offer.

(d) No Conflicts. The execution, delivery and performance of the Transaction Documents by the Company and the consummation by the Company of the transactions contemplated hereby and thereby (including, without limitation, the issuance of the Common Shares, the Warrants and Warrant Shares and the reservation for issuance of the Warrant Shares) will not (i) result in a violation of the Company's Certificate of Incorporation (including, without limitation, any certificates of designation contained therein) or other organizational documents of the Company or any of its Subsidiaries, any capital stock of the Company, or Bylaws, (ii) conflict with, or constitute a default (or an event which with notice or lapse of time or both would become a default) under, or give to others any rights of termination, amendment, acceleration or cancellation of, any agreement, note, lease, mortgage, deed or other instrument to which the Company is a party or by which the Company is bound or affected that has been filed as an exhibit to the SEC Documents, or (iii) result in a violation of any law, rule, regulation, order, judgment or decree (including, without limitation, federal and state and foreign securities laws and regulations and the rules and regulations of the Principal Market) applicable to the Company or any of its Subsidiaries or by which any property or asset of the Company or any of its Subsidiaries is bound or affected except, in the case of clause (ii) above, to the extent such violations that could not reasonably be expected to be material.

(e) Consents. The Company is not required to obtain any consent from, authorization or order of, or make any filing which has not already been obtained or made (including, without limitation as to the listing on the Principal Market of the Common Shares and the Warrant Shares upon issuance) or registration with (other than the filing with the SEC of the Prospectus Supplement and any other filings as may be required by any state securities agencies), any court, governmental agency or any regulatory or self-regulatory agency or any other Person in order for the Company to execute, deliver or perform any of its obligations under or contemplated by the Transaction Documents, in each case, in accordance with the terms hereof or thereof. All consents, authorizations, orders, filings and registrations which the Company is required to obtain at or prior to the Closing will have been obtained or effected on or prior to the Closing Date, and neither the Company nor any of its Subsidiaries is aware of any facts or circumstances which might prevent the Company from obtaining or effecting any of the registration, application or filings contemplated by the Transaction Documents. Except as disclosed in the SEC Reports, the Company is not in violation of the requirements of the Principal Market or foreign, federal, state or local securities laws, and has no knowledge of any facts or circumstances which could reasonably lead to such violation or delisting or suspension of the Common Stock in the foreseeable future. No statute, rule, regulation, executive order, decree, ruling or injunction has been enacted, entered, promulgated or endorsed by any court or governmental authority of competent jurisdiction that prohibits the consummation of any of any of the transactions contemplated by the Transaction Documents, and no actions, suits or proceedings are pending or threatened by any Person that seeks to enjoin, prohibit or otherwise adversely affect any of the transactions contemplated by the Transaction Documents.

(f) Acknowledgment Regarding Buyer's Purchase of Securities. The Company acknowledges and agrees that the Buyer is acting solely in the capacity of an arm's length purchaser with respect to the Transaction Documents and the transactions contemplated hereby

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and thereby and that the Buyer is not (i) an officer or director of the Company or any of its Subsidiaries or (ii) an “affiliate” (as defined in Rule 144 promulgated under the 1933 Act (or a successor rule thereto) (collectively, “**Rule 144**”)) of the Company (an “**Affiliate**”) or any of its Subsidiaries. The Company further acknowledges that the Buyer is not acting as a financial advisor or fiduciary of the Company or any of its Subsidiaries (or in any similar capacity) with respect to the Transaction Documents and the transactions contemplated hereby and thereby, and any advice given by the Buyer or any of its representatives or agents in connection with the Transaction Documents and the transactions contemplated hereby and thereby is merely incidental to the Buyer’s purchase of the Securities. The Company further represents to the Buyer that the Company’s decision to enter into the Transaction Documents has been based solely on the independent evaluation by the Company and its representatives.

(g) Placement Agent’s Fees. Except for Roth Capital Partners, LLC (the “**Placement Agent**”), neither the Company nor any of its Subsidiaries has engaged any placement agent or other agent in connection with the sale of the Securities. The Company shall be responsible for the payment of any placement agent’s fees, financial advisory fees, or brokers’ commissions (other than for Persons engaged by the Buyer, if any) relating to or arising out of the transactions contemplated hereby.

(h) No Integrated Offering. None of the Company, its Subsidiaries or any of their Affiliates, nor any Person acting on their behalf, has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security under circumstances that would cause this offering of the Securities to require approval of stockholders of the Company under any applicable stockholder approval provisions, including, without limitation, under the rules and regulations of any exchange or automated quotation system on which any of the securities of the Company are listed or designated. None of the Company, its Subsidiaries or any of their Affiliates nor any Person acting on their behalf will take any action or steps that would cause the offering of any of the Securities to be integrated with other offerings. No registration of the offer, sale or transfer of any of the Securities is required, except for registration contemplated hereby pursuant to the Registration Statement.

(i) Application of Takeover Protections; Rights Agreement. The Company and its board of directors have taken all necessary action, if any, in order to render inapplicable any control share acquisition, interested stockholder, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Certificate of Incorporation, Bylaws or other organizational documents or the laws of the jurisdiction of its incorporation or otherwise that can be waived by approval of the board of directors and which is or could become applicable to the Buyer as a result of the transactions contemplated by this Agreement, including, without limitation, the Company’s issuance of the Securities and the Buyer’s ownership of the Securities. The Company and its board of directors have taken all necessary action, if any, in order to render inapplicable any stockholder rights plan or similar arrangement relating to accumulations of beneficial ownership of shares of Common Stock or a change in control of the Company or any of its Subsidiaries.

(j) SEC Documents; Financial Statements. During the two years prior to the date hereof, the Company has timely filed all reports, schedules, forms, statements and other documents required to be filed by it with the SEC pursuant to the reporting requirements of the

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Securities Exchange Act of 1934, as amended (the “**1934 Act**”) (all of the foregoing filed prior to the date hereof and all exhibits included therein and financial statements, notes and schedules thereto and documents incorporated by reference therein being herein referred to as the “**SEC Documents**”). As of their respective dates, the SEC Documents complied in all material respects with the requirements of the 1934 Act and the rules and regulations of the SEC promulgated thereunder applicable to the SEC Documents, and none of the SEC Documents, at the time they were filed with the SEC, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. As of their respective dates, the financial statements of the Company included in the SEC Documents complied in all material respects with applicable accounting requirements and the published rules and regulations of the SEC with respect thereto as in effect as of the time of filing. Such financial statements have been prepared in accordance with generally accepted accounting principles, consistently applied, during the periods involved (except (i) as may be otherwise indicated in such financial statements or the notes thereto, or (ii) in the case of unaudited interim statements, to the extent they may exclude footnotes or may be condensed or summary statements) and fairly present in all material respects the financial position of the Company as of the dates thereof and the results of its operations and cash flows for the periods then ended (subject, in the case of unaudited statements, to normal year-end audit adjustments which will not be material, either individually or in the aggregate). No other information provided by or on behalf of the Company to the Buyer that is not included in the SEC Documents contains any untrue statement of a material fact or omits to state any material fact necessary in order to make the statements therein not misleading, in the light of the circumstance under which they are or were made.

(k) Conduct of Business; Regulatory Permits. Neither the Company nor any of its Subsidiaries is in violation of any term of or in default under its certificate of incorporation, any certificate of designation, preferences or rights of any outstanding series of its preferred stock, its bylaws, or any other organizational charter or certificate of formation thereof, as applicable. Neither the Company nor any of its Subsidiaries is in violation of any judgment, decree or order or any statute, ordinance, rule or regulation applicable to the Company or any of its Subsidiaries, and neither the Company nor any of its Subsidiaries will conduct its business in violation of any of the foregoing, except in all cases as disclosed in the SEC Documents and for possible violations which could not, individually or in the aggregate, have a Material Adverse Effect. Since January 1, 2010, (i) the Common Stock has been listed or designated for quotation on the Principal Market, (ii) trading in the Common Stock has not been suspended by the SEC or the Principal Market and (iii) the Company has received no communication, written or oral, from the SEC or, except as disclosed in the SEC Documents, the Principal Market regarding or relating to the suspension or delisting of the Common Stock from the Principal Market. The Company and each of its Subsidiaries possess all certificates, authorizations and permits issued by the appropriate regulatory authorities necessary to conduct their respective businesses, except where the failure to possess such certificates, authorizations or permits would not have, individually or in the aggregate, a Material Adverse Effect, and neither the Company nor any such Subsidiary has received any notice of proceedings relating to the revocation or modification of any such certificate, authorization or permit.

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(l) Equity Capitalization. As of the date hereof the authorized capital stock of the Company consists of (i) 150,000,000 shares of Common Stock, of which (A) 149,900,000 shares are designated Common Stock, of which 51,847,731 shares are issued and outstanding, and (B) 100,000 are designated Series B Common Stock, of which 49,998 shares are issued and outstanding, and (ii) 20,000,000 shares of preferred stock, of which none are issued and outstanding. All of such outstanding shares are duly authorized and have been, or upon issuance will be, validly issued and are fully paid and non-assessable. As of the date hereof, 437,112 shares of the Company's issued and outstanding Common Stock on the date hereof are owned by Persons who are "Affiliates" (as defined in Rule 405 of the 1933 Act and calculated based on the assumption that only officers, directors and holders of at least 10% of the Company's issued and outstanding Common Stock are "Affiliates" without conceding that any such Persons are "Affiliates" for purposes of federal securities laws) of the Company or any of its Subsidiaries. The SEC Documents contain true, correct and complete copies of the Company's Certificate of Incorporation, as amended and as in effect on the date hereof (the "**Certificate of Incorporation**"), and the Company's bylaws, as amended and as in effect on the date hereof (the "**Bylaws**"), and the terms of all securities convertible into, or exercisable or exchangeable for, shares of Common Stock and the material rights of the holders thereof in respect thereto. Based on the number of outstanding shares of Common Stock as set forth in this Section 3(l) and assuming the accuracy of the Buyer's representation in Section 2(d), upon execution of this Agreement, the Buyer will beneficially own (within the meaning of Section 13(d) of the 1934 Act and the rules and regulations thereunder) no more than 9.9% of the Common Stock.

(m) Internal Accounting and Disclosure Controls. The Company and each of its Subsidiaries maintains internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the 1934 Act) that is effective 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, including that (i) transactions are executed in accordance with management's general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain asset and liability accountability, (iii) access to assets or incurrence of liabilities is permitted only in accordance with management's general or specific authorization and (iv) the recorded accountability for assets and liabilities is compared with the existing assets and liabilities at reasonable intervals and appropriate action is taken with respect to any difference. The Company maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) under the 1934 Act) that are effective in ensuring that information required to be disclosed by the Company in the reports that it files or submits under the 1934 Act is recorded, processed, summarized and reported, within the time periods specified in the rules and forms of the SEC, including, without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the 1934 Act is accumulated and communicated to the Company's management, including its principal executive officer or officers and its principal financial officer or officers, as appropriate, to allow timely decisions regarding required disclosure. Except as set forth in the SEC Documents, neither the Company nor any of its Subsidiaries has received any notice or correspondence from any accountant or other Person relating to any potential material weakness or significant deficiency in any part of the internal controls over financial reporting of the Company or any of its Subsidiaries.

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(n) Off Balance Sheet Arrangements. There is no transaction, arrangement, or other relationship between the Company or any of its Subsidiaries and an unconsolidated or other off balance sheet entity that is required to be disclosed by the Company in its 1934 Act filings and is not so disclosed or that otherwise could be reasonably likely to have a Material Adverse Effect.

(o) Foreign Corrupt Practices; Certain Other Unlawful Matters. Neither the Company nor any of its Subsidiaries nor any director, officer, agent, employee or other Person acting on behalf of the Company or any of its Subsidiaries has, in the course of its actions for, or on behalf of, the Company or any of its Subsidiaries (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expenses relating to political activity; (ii) made any direct or indirect unlawful payment to any foreign or domestic government official or employee from corporate funds; (iii) violated or is in violation of any provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended (or rules or regulations or interpretations thereunder); or (iv) made any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment to any foreign or domestic government official or employee or otherwise. The Company and its Subsidiaries are in compliance with, and have not previously violated, the USA Patriot Act of 2001 and all other applicable U.S. and non-U.S. anti-money laundering laws and regulations, including, without limitation, the laws, regulations and Executive Orders and sanctions programs administered by the U.S. Office of Foreign Assets Control, including, without limitation, (i) Executive Order 13224 of September 23, 2001 entitled, "Blocking Property and Prohibiting Transactions With Persons Who Commit, Threaten to Commit, or Support Terrorism" (66 Fed. Reg. 49079 (2001)); and (ii) any regulations contained in 31 CFR, Subtitle B, Chapter V.

(p) Sarbanes-Oxley Act. The Company and each Subsidiary is in material compliance with all applicable requirements of the Sarbanes-Oxley Act of 2002 that are effective as of the date hereof, and all applicable rules and regulations promulgated by the SEC thereunder that are effective as of the date hereof.

(q) Transactions With Affiliates. Except as disclosed in the SEC Documents, none of the officers, directors or employees or Affiliates of the Company or any of its Subsidiaries is presently a party to any transaction with the Company or any of its Subsidiaries (other than for ordinary course services as employees, officers or directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, or otherwise requiring payments to or from any such officer, director or employee or, to the knowledge of the Company or any of its Subsidiaries, any corporation, partnership, trust or other Person in which any such officer, director or employee or Affiliate has a substantial interest or is an employee, officer, director, trustee or partner.

(r) Absence of Litigation. Except as disclosed in the SEC Documents, there is no action, suit, proceeding, inquiry or investigation before or by any court, public board, government agency, self-regulatory organization or body pending or, to the knowledge of the Company, threatened against or affecting the Company or any of its Subsidiaries, the Common Stock or any of the Company' s or its Subsidiaries' officers or directors which is outside of the ordinary course of business or individually or in the aggregate material to the Company or any of its Subsidiaries. There has not been, and to the knowledge of the Company, there is not pending or contemplated, any investigation by the SEC involving the Company, any of its Subsidiaries or

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any current or former director or officer of the Company or any of its Subsidiaries. The SEC has not issued any stop order or other order suspending the effectiveness of the Registration Statement.

(s) Insurance. The Company and each of its Subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as management of the Company believes to be prudent and customary in the businesses in which the Company and its Subsidiaries are engaged. Neither the Company nor any such Subsidiary has been refused any insurance coverage sought or applied for, and neither the Company nor any such Subsidiary has any reason to believe that it will be unable to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not have a Material Adverse Effect.

(t) Employee Relations. Neither the Company nor any of its Subsidiaries is a party to any collective bargaining agreement or employs any member of a union. The Company believes that its and its Subsidiaries' relations with their respective employees are good. No executive officer (as defined in Rule 501(f) promulgated under the 1933 Act) or other key employee of the Company or any of its Subsidiaries has notified the Company or any such Subsidiary that such officer intends to leave the Company or any such Subsidiary or otherwise terminate such officer's employment with the Company or any such Subsidiary. No executive officer or other key employee of the Company or any of its Subsidiaries is, or is now expected to be, in violation of any material term of any employment contract, confidentiality, disclosure or proprietary information agreement, non-competition agreement, or any other contract or agreement or any restrictive covenant, and the continued employment of each such executive officer or other key employee (as the case may be) does not subject the Company or any of its Subsidiaries to any liability with respect to any of the foregoing matters. The Company and its Subsidiaries are in compliance with all federal, state, local and foreign laws and regulations respecting labor, employment and employment practices and benefits, terms and conditions of employment and wages and hours, except where failure to be in compliance would not, either individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect.

(u) Title. Except as set forth in the SEC Documents, the Company and its Subsidiaries have good and marketable title in fee simple to all real property, and have good and marketable title to all personal property, owned by them which is material to the business of the Company and its Subsidiaries, in each case, free and clear of all liens, encumbrances and defects except such as do not materially affect the value of such property and do not interfere with the use made and proposed to be made of such property by the Company and any of its Subsidiaries. Any real property and facilities held under lease by the Company or any of its Subsidiaries are held by them under valid, subsisting and enforceable leases with such exceptions as are not material and do not interfere with the use made and proposed to be made of such property and buildings by the Company or any of its Subsidiaries.

(v) Intellectual Property Rights. Except as set forth in the SEC Documents, the Company and its Subsidiaries own or possess adequate rights or licenses to use all trademarks, trade names, service marks, service mark registrations, service names, patents, patent rights, copyrights, original works, inventions, licenses, approvals, governmental authorizations, trade

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secrets and other intellectual property rights and all applications and registrations therefor (“**Intellectual Property Rights**”) necessary to conduct their respective businesses as now conducted and as presently proposed to be conducted. None of the Company’s or its Subsidiaries’ Intellectual Property Rights have expired, terminated or been abandoned, or are expected to expire, terminate or be abandoned, within three years from the date of this Agreement, except where the expiration, termination or abandonment, either individually or in the aggregate, would not reasonably be expected to have a Material Adverse Effect. The Company has no knowledge of any infringement by the Company or any of its Subsidiaries of Intellectual Property Rights of others. There is no claim, action or proceeding being made or brought, or to the knowledge of the Company or any of its Subsidiaries, being threatened, against the Company or any of its Subsidiaries regarding their Intellectual Property Rights. The Company is not aware of any facts or circumstances which might give rise to any of the foregoing infringements or claims, actions or proceedings. The Company and each of its Subsidiaries have taken reasonable security measures to protect the secrecy, confidentiality and value of all of their Intellectual Property Rights.

(w) Environmental Laws. The Company and its Subsidiaries (i) are in compliance with all Environmental Laws (as defined below), (ii) have received all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses and (iii) are in compliance with all terms and conditions of any such permit, license or approval where, in each of the foregoing clauses (i), (ii) and (iii), the failure to so comply could be reasonably expected to have, individually or in the aggregate, a Material Adverse Effect. The term “**Environmental Laws**” means all federal, state, local or foreign laws of the applicable jurisdictions to which the Company is subject relating to pollution or protection of human health or the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata), including, without limitation, laws relating to emissions, discharges, releases or threatened releases of chemicals, pollutants, contaminants, or toxic or hazardous substances or wastes (collectively, “**Hazardous Materials**”) into the environment, or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials, as well as all authorizations, codes, decrees, demands or demand letters, injunctions, judgments, licenses, notices or notice letters, orders, permits, plans or regulations issued, entered, promulgated or approved thereunder.

(x) Investment Company Status. The Company is not, and upon consummation of the sale of the Securities will not be, an “investment company,” an Affiliate of an “investment company,” a company controlled by an “investment company” or an “affiliated person” of, or “promoter” or “principal underwriter” for, an “investment company” as such terms are defined in the Investment Company Act of 1940, as amended.

(y) Manipulation of Price. Neither the Company nor any of its Subsidiaries has, and, to the knowledge of the Company, no Person acting on their behalf has, directly or indirectly, (i) taken any action designed to cause or to result in the stabilization or manipulation of the price of any security of the Company or any of its Subsidiaries to facilitate the sale or resale of any of the Securities, (ii) sold, bid for, purchased, or paid any compensation for soliciting purchases of, any of the Securities (other than the Placement Agent), or (iii) except as disclosed in the SEC Reports, paid or agreed to pay to any Person any compensation for soliciting another to purchase any other securities of the Company or any of its Subsidiaries.

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(z) Acknowledgement Regarding Buyer's Trading Activity. It is understood and acknowledged by the Company that (i) following the public disclosure of the transactions contemplated by the Transaction Documents, in accordance with the terms thereof, the Buyer has not been and will not be asked by the Company or any of its Subsidiaries to agree, nor has the Buyer agreed with the Company or any of its Subsidiaries, to desist from effecting any transactions in or with respect to (including, without limitation, purchasing or selling, long and/or short) any securities of the Company, or "derivative" securities based on securities issued by the Company or to hold the Securities for any specified term; (ii) the Buyer, and counterparties in "derivative" transactions to which the Buyer is a party, directly or indirectly, presently may have a "short" position in the Common Stock which was established prior to the Buyer's knowledge of the transactions contemplated by the Transaction Documents; and (iii) the Buyer shall not be deemed to have any affiliation with or control over any arm's length counterparty in any "derivative" transaction. The Company further understands and acknowledges that following the public disclosure of the transactions contemplated by the Transaction Documents pursuant to the Press Release (as defined below) the Buyer may engage in hedging and/or trading activities at various times during the period that the Securities are outstanding, including, without limitation, during the periods that the value and/or number of the Warrant Shares deliverable with respect to the Securities are being determined and (b) such hedging and/or trading activities, if any, can reduce the value of the existing stockholders' equity interest in the Company both at and after the time the hedging and/or trading activities are being conducted. The Company acknowledges that such aforementioned hedging and/or trading activities do not and will not constitute a breach of this Agreement or any other Transaction Document or any of the documents executed in connection herewith or therewith.

(aa) Registration Eligibility. The Company is eligible to register the issuance and sale of the Securities to the Buyer using Form S-3 promulgated under the 1933 Act.

(bb) Transfer Taxes. On the Closing Date, all stock transfer or other taxes (other than income or similar taxes) which are required to be paid in connection with the issuance and sale of the Securities to be sold to the Buyer hereunder will be, or will have been, fully paid or provided for by the Company, and all laws imposing such taxes will be or will have been complied with.

(cc) Registration Rights. No holder of securities of the Company has rights to the registration of any securities of the Company because of the issuance of the Securities hereunder that could expose the Company to material liability or the Buyer to any liability or that could impair the Company's ability to consummate the issuance and sale of the Securities in the manner, and at the times, contemplated hereby, which rights have not been waived by the holder thereof as of the date hereof.

(dd) Disclosure. The Company confirms that neither it nor any other Person acting on its behalf has provided the Buyer or its agents or counsel with any information that constitutes or could reasonably be expected to constitute material, non-public information concerning the Company or any of its Subsidiaries, other than the existence of the transactions contemplated by this Agreement and the other Transaction Documents and such information as may be filed by the Company as a "Free Writing Prospectus" under the 1933 Act. The Company understands and confirms that the Buyer will rely on the foregoing representations in effecting transactions in

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securities of the Company. All disclosure provided to the Buyer regarding the Company and its Subsidiaries, their businesses and the transactions contemplated hereby, including the schedules to this Agreement, furnished by or on behalf of the Company or any of its Subsidiaries is true and correct and does not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made therein, in the light of the circumstances under which they were made, not misleading. Each material press release issued by the Company or any of its Subsidiaries during the twelve (12) months preceding the date of this Agreement did not at the time of release contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they are made, not misleading. No event or circumstance has occurred or information exists with respect to the Company or any of its Subsidiaries or its or their business, properties, liabilities, prospects, operations (including results thereof) or conditions (financial or otherwise), which, under applicable law, rule or regulation, requires public disclosure at or before the date hereof or announcement by the Company but which has not been so publicly disclosed. The Company acknowledges and agrees that the Buyer is not making and has not made any representations or warranties with respect to the transactions contemplated hereby other than those specifically set forth in Section 2.

#### 4. COVENANTS.

(a) Registration Statement. If at any time following the date hereof the Registration Statement is not effective or is not otherwise available for the issuance of the Securities or any prospectus contained therein is not available for use, the Company shall immediately notify the holders of the Securities in writing that the Registration Statement is not then effective or a prospectus contained therein is not available for use and thereafter shall promptly notify such holders when the Registration Statement is effective again and available for the issuance of the Securities or such prospectus is again available for use.

(b) Prospectus Supplement and Blue Sky. Immediately prior to execution of this Agreement, the Company shall have delivered, and as soon as practicable after execution of this Agreement the Company shall file, the Prospectus Supplement with respect to the Securities as required under, and in conformity with, the 1933 Act, including Rule 424(b) thereunder. The Company shall have taken immediately upon execution of this Agreement such action, if any, as required in order to obtain an exemption for, or to qualify the Securities for, the sale to the Buyer at the Closing pursuant to this Agreement under applicable securities or "Blue Sky" laws of the states of the United States (or to obtain an exemption from such qualification), and shall provide evidence of any such action so taken to the Buyer on or prior to the Closing Date. Without limiting any other obligation of the Company under this Agreement, the Company shall timely make all filings and reports relating to the offer and sale of the Securities required under all applicable securities laws (including, without limitation, all applicable federal securities laws and all applicable "Blue Sky" laws), and the Company shall comply with all applicable federal, state and local laws, statutes, rules, regulations and the like relating to the offering and sale of the Securities to the Buyer. The Company shall take all necessary action to ensure the compliance with all applicable securities laws (including without limitation "Blue Sky" laws) with respect to the issuance of any Warrant Shares from time to time upon exercise of the Warrants.

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(c) Reporting Status. Until the date on which no Warrants are outstanding (the “**Reporting Period**”), the Company shall timely file all reports required to be filed with the SEC pursuant to the 1934 Act, and the Company shall not terminate its status as an issuer required to file reports under the 1934 Act even if the 1934 Act or the rules and regulations thereunder would no longer require or otherwise permit such termination.

(d) Listing. The Company has secured the listing of all of the Common Shares and Warrant Shares (subject to notice of issuance) on the Principal Market in connection with the transactions contemplated hereby and by the Warrants and shall secure the listing or designation for quotation (as the case may be) of all of the Common Shares and Warrant Shares upon each other national securities exchange and automated quotation system, if any, upon which the Common Stock is then listed or designated for quotation (as the case may be) (subject to official notice of issuance) (but in no event later than the Closing Date) and shall maintain such listing or designation for quotation (as the case may be) of all the shares of Common Stock from time to time issuable under the terms of the Transaction Documents on the Principal Market and such national securities exchange or automated quotation system. The Company shall maintain the Common Stock’s listing or designation for quotation (as the case may be) on the Principal Market, The New York Stock Exchange, the Nasdaq Global Market or the Nasdaq Global Select Market and, only if the Company cannot maintain the listing of its Common Stock on the foregoing exchanges after using its best efforts, then the Company shall maintain the quotation of the Common Stock on the OTCQX or the OTCQB tier of the OTC Markets Group, Inc. (each, an “**Eligible Market**”). Neither the Company nor any of its Subsidiaries shall take any action which could be reasonably expected to result in the delisting or suspension of the Common Stock on an Eligible Market. The Company shall pay all fees and expenses in connection with satisfying its obligations under this Section 4(d).

(e) Fees. Prior to the date hereof, the Company has paid, to legal counsel for the Buyer and for the benefit of the Buyer, a non-refundable, non-accountable document preparation fee in the amount of \$25,000.00. In addition, the Buyer shall pay directly to the Placement Agent, on behalf of the Company, an amount equal to seven percent (7%) of the Purchase Price, which amount shall be withheld by the Buyer from the Purchase Price to be paid at the Closing (and only due and payable simultaneously with and upon consummation of the Closing). Except as set forth above, or as may otherwise be set forth in this Agreement or the other Transaction Documents or agreed by the parties, each party to this Agreement shall bear its own expenses in connection with the sale of the Securities to the Buyer.

(f) Pledge of Securities. Notwithstanding anything to the contrary contained in this Agreement, the Company acknowledges and agrees that the Securities may be pledged by the Buyer in connection with a bona fide margin agreement or other loan or financing arrangement that is secured by the Securities. The pledge of Securities shall not be deemed to be a transfer, sale or assignment of the Securities hereunder, and the Buyer in effecting a pledge of Securities shall not be required to provide the Company with any notice thereof or otherwise make any delivery to the Company pursuant to this Agreement or any other Transaction Document. The Company hereby agrees to execute and deliver such documentation as a pledgee of the Securities may reasonably request in connection with a pledge of the Securities to such pledgee by the Buyer.

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(g) Disclosure of Transactions and Other Material Information. The Company shall, on or before 9:30 a.m. (but in no event prior to 9:15 a.m.), New York time, on the first Business Day following the date hereof, issue a press release (the “**Press Release**”) reasonably acceptable to the Buyer disclosing all the material terms of the transactions contemplated by the Transaction Documents. On or before 9:30 a.m. (but in no event prior to 9:15 a.m.), New York time, on the first Business Day following the date hereof, the Company shall file a Current Report on Form 8-K describing all the material terms of the transactions contemplated by the Transaction Documents in the form required by the 1934 Act and attaching all the material Transaction Documents (including, without limitation, this Agreement (and all schedules to this Agreement) and the form of Warrants) (including all attachments, the “**8-K Filing**”). From and after the issuance of the Press Release, the Company shall have disclosed all material, non-public information (if any) delivered to the Buyer by the Company or any of its Subsidiaries, or any of their respective officers, directors, employees or agents in connection with the transactions contemplated by the Transaction Documents. Except for communications relating to Buyer’s participation right described in subsection (m) below, the Company shall not, and the Company shall cause each of its Subsidiaries and each of its and their respective officers, directors, employees and agents, not to, provide the Buyer with any material, non-public information regarding the Company or any of its Subsidiaries from and after the issuance of the Press Release without the express prior written consent of the Buyer. In the event of a breach of any of the foregoing covenants by the Company, any of its Subsidiaries, or any of its or their respective officers, directors, employees and agents (as determined in the reasonable good faith judgment of the Buyer), in addition to any other remedy provided herein or in the Transaction Documents, the Buyer shall have the right to make a public disclosure, in the form of a press release, public advertisement or otherwise, of such material, non-public information without the prior approval by the Company, any of its Subsidiaries, or any of its or their respective officers, directors, employees or agents. The Buyer shall not have any liability to the Company, any of its Subsidiaries, or any of its or their respective officers, directors, employees, stockholders or agents, for any such disclosure. Subject to the foregoing, neither the Company or its Subsidiaries nor the Buyer shall issue any press releases or any other public statements with respect to the transactions contemplated hereby; provided, however, the Company shall be entitled, without the prior approval of the Buyer, to make any press release or other public disclosure with respect to such transactions (i) in substantial conformity with the 8-K Filing and contemporaneously therewith and (ii) as is required by applicable law and regulations (provided that in the case of clause (i) the Buyer shall be consulted by the Company in connection with any such press release or other public disclosure prior to its release). Without the prior written consent of the Buyer, the Company shall not (and shall cause each of its Subsidiaries and Affiliates to not) disclose the name of the Buyer in any filing (other than in the Transaction Documents filed as exhibits to the 8-K Filing), announcement, release or otherwise.

(h) Additional Issuance of Securities. The Company agrees that for the period commencing on the Closing Date and ending on the date that is ninety (90) days from the Closing Date (the “**Restricted Period**”), neither the Company nor any of its Subsidiaries shall directly or indirectly issue, offer, sell, grant any option or right to purchase, or otherwise dispose of (or announce any issuance, offer, sale, grant of any option or right to purchase or other disposition of) any Common Stock or any security or any debt or other instrument directly or indirectly convertible or exchangeable or exercisable into Common Stock (each a “**Convertible Security**”) or which constitutes (or would constitute but for lack of a fixed exercise or conversion

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or similar price or if it were not solely cash settled) a “derivative security” (as defined under the rules and regulations under Section 16 of the 1934 Act) or otherwise an equity-linked or related security (including, without limitation, any “equity security” (as that term is defined under Rule 405 promulgated under the 1933 Act) (any such issuance, offer, sale, grant, disposition or announcement (whether occurring during the Restricted Period or at any time thereafter) is referred to as a “**Subsequent Placement**”). This Section 4(h) shall not apply in respect of the issuance of (A) shares of Common Stock or options to purchase Common Stock or other equity linked securities (e.g., stock appreciation rights) to directors, officers or employees of the Company in their capacity as such pursuant to an Approved Share Plan), provided that (1) all such issuances (taking into account the shares of Common Stock issuable upon exercise of such options) after the date hereof pursuant to this clause (A) do not, in the aggregate, exceed more than 2% of the shares of Common Stock and (2) the exercise price of any such options is not lowered, none of such options are amended to increase the number of shares issuable thereunder and none of the terms or conditions of any such options are otherwise materially changed in any manner that adversely affects any of the Buyer; (B) shares of Common Stock issued upon the conversion or exercise of Convertible Securities (other than standard options to purchase Common Stock issued pursuant to an Approved Share Plan that are covered by clause (A) above) issued prior to the Closing Date, provided that the conversion price of any such Convertible Securities (other than standard options to purchase Common Stock issued pursuant to an Approved Share Plan that are covered by clause (A) above) is not lowered, none of such Convertible Securities (other than standard options to purchase Common Stock issued pursuant to an Approved Share Plan that are covered by clause (A) above) are amended to increase the number of shares issuable thereunder and none of the terms or conditions of any such Convertible Securities (other than standard options to purchase Common Stock issued pursuant to an Approved Share Plan that are covered by clause (A) above) are otherwise materially changed in any manner that adversely affects the Buyer; (C) a warrant to purchase up to 500,000 shares of Common Stock that was issued in connection with a private placement transaction that was completed in January 2012 as described in the SEC Documents, (D) unregistered and restricted shares of Common Stock in payment of professional services and/or materials or goods, (E) the Warrants; (F) the Warrant Shares; (G) equity securities to a seller, or in the case of a merger, the equity holders of the target company in such merger, or the officers or employees thereof, in each case in connection with a bona fide merger, business combination transaction or acquisition of stock or assets outside of the ordinary course; (H) Common Stock in connection with a stock split or other subdivision or combination, or a stock dividend made to all holders of any Company equity on a pro rata basis; or (I) shares of Common Stock or Convertible Securities issued to a bank or other Person acting as bona fide lender in connection with a credit facility (or amendment to the Company’s existing credit facility) or other indebtedness provided by such Person (each of the foregoing in clauses (A) through (G), collectively the “**Excluded Securities**”). “**Approved Share Plan**” means any employee incentive or benefit plan which has been approved by the board of directors of the Company prior to or subsequent to the date hereof pursuant to which shares of Common Stock and standard options to purchase Common Stock may be issued to any employee, officer or director for services provided to the Company in their capacity as such.

(i) Reservation of Shares. So long as any of the Warrants remain outstanding, the Company shall take all action necessary to at all times have authorized, and reserved for the purpose of issuance, the maximum number of shares of Common Stock issuable upon exercise of

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all the Warrants (without regard to any beneficial ownership limitations on the exercise of the Warrants set forth therein).

(j) Conduct of Business. The business of the Company and its Subsidiaries shall not be conducted in violation of any law, ordinance or regulation of any governmental entity in any jurisdiction to which the Company is subject, except where such violations would not result, either individually or in the aggregate, in a Material Adverse Effect.

(k) Certain Restrictions as to Buyer. For so long as the Buyer or any of its Affiliates holds any Securities, neither the Buyer nor any Affiliate thereof will: (i) vote any shares of Common Stock beneficially owned by it, solicit any proxies, or seek to advise or influence any Person with respect to any voting securities of the Company; (ii) engage or participate in any actions, plans or proposals which relate to or would result in (a) acquiring additional securities of the Company, alone or together with any other Person, which would result in the Buyer or its Affiliates beneficially owning (within the meaning of Section 13(d) under the 1934 Act) more than 9.9% of the Common Stock, (b) an extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving Company or any of its Subsidiaries, (c) a sale or transfer of a material amount of assets of the Company or any of its Subsidiaries, (d) any change in the present board of directors or management of the Company, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board, (e) any material change in the present capitalization or dividend policy of the Company, (f) any other material change in the Company's business or corporate structure, including but not limited to, if the Company is a registered closed-end investment company, any plans or proposals to make any changes in its investment policy for which a vote is required by Section 13 of the Investment Company Act of 1940, (g) changes in the Company's charter, bylaws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Company by any Person, (h) causing a class of securities of the Company to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association, (i) a class of equity securities of the Company becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Act, or (j) any action, intention, plan or arrangement similar to any of those enumerated above; or (iii) request the Company or its directors, officers, employees, agents or representatives to amend or waive any provision of this Section 4(k). The restrictions contained in this Section 4(k) shall not limit any of the Buyer's rights to enforce or exercise its rights as to the Securities or under the Transaction Documents.

(l) Restrictions on Bridge Note Holders. In the event that any of the holders ("**Bridge Note Holders**") of any of the Company's outstanding promissory notes issued pursuant to private placement transactions (collectively, the "**Bridge Notes**") exchange any or all of such Bridge Notes into shares of Common Stock, the Bridge Note Holders shall not sell such shares of Common Stock for at least six (6) months following the Closing Date.

(m) Additional Financings. The Company agrees that for the period commencing on the Closing Date and ending on the date that is one hundred eighty (180) days from the Closing Date, the Buyer shall have the right, at its option, to participate in other equity or equity-linked financings completed by the Company. The Company shall provide Buyer with written notice of such financing transaction (the ("**Participation Notice**") at least five (5) Business Days prior to

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the expected closing of such financing. Within two (2) Business Days of its receipt of the Participation Notice, Buyer shall notify the Company in writing of its desire to participate in any such offering and the amount of its desired participation. In the event that Buyer's participation in any such financing would cause such financing to be in violation of any shareholder approval and/or rules for continued listing on the Primary Market, then Buyer's right to participate shall be limited to the extent necessary in order for such financing to be in compliance with the Primary Market's continued listing rules. Any material change to the terms of such equity or equity-linked financings following the delivery of the Participation Notice will reset the five (5) Business Day-period and a new Participation Notice shall be delivered to Buyer.

(n) Restriction on Short Sales. The Buyer shall not engage in any Short Sales involving the Securities for a period of ninety (90) days following the Closing Date.

(o) Listing on Principal Market. Unless the Company has already taken such action, the Company shall immediately, and in no event later than one (1) Business Day following the Closing Date, file a appeal and request a hearing before the NASDAQ Listing Qualifications Panel to stay the delisting of its Common Stock from the Principal Market. The Company shall use its best efforts to prepare a plan to regain compliance with NASDAQ's \$1.00 minimum bid price and, in good faith, shall propose such plan to the NASDAQ Listing Qualifications Panel at such hearing. If the NASDAQ Listing Qualifications Panel accepts such plan, the Company shall use its best efforts to take any action, including any action that NASDAQ may determine or recommend to the Company, to maintain its listing on the Principal Market.

(p) Proxy Statement.

(i) As promptly as practicable following the Closing Date, and in any event within seven (7) Business Days of the Closing Date, the Company shall prepare and file with the SEC a preliminary form of proxy statement relating to an annual or special meeting (the "Shareholders' Meeting") of shareholders of the Company (together with any amendments thereof or supplements thereto, the "Proxy Statement") at which the shareholders shall be asked to approve a proposal to effectuate a reverse split of the Common Stock (the "Reverse Split"). The Company shall provide the Buyer with a reasonable opportunity to review and comment on such Proxy Statement and such Proxy Statement shall be in a form reasonably acceptable to the Buyer prior to its filing with the SEC.

(ii) If the Proxy Statement is not to be reviewed by the SEC or if no notice of review is received by the Company within ten (10) calendar days of the filing of the preliminary Proxy Statement, the Company will use its best efforts to cause the definitive Proxy Statement to be mailed to the Company's shareholders as soon as practicable following the 10<sup>th</sup> calendar day after the date of filing of the preliminary Proxy Statement.

(iii) If the Proxy Statement is reviewed by the SEC, the Company will use its best efforts to cause the definitive Proxy Statement to be mailed to the Company's shareholders as promptly as reasonably practicable after confirmation from the SEC that it has no further comments and in no event later than twenty (20) Business Days from the Closing Date unless the Company has received express written approval from the Nasdaq Listings Qualifications Panel to carry out such mailing on a later date. In the event the SEC provides comments on the Proxy

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Statement to the Company, the Company shall respond to the SEC in writing and complete all actions to comply with any and all requests from the SEC within two (2) Business Days from the date of such comment letter.

(iv) The Company will cause the information included in the Proxy Statement, at the time of the mailing or filing with the SEC of the Proxy Statement or any amendments or supplements thereto, and at the time of the Shareholders' Meeting, not to contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. The Company shall give the Buyer a reasonable opportunity to review revised drafts of the Proxy Statement and related filings and draft responses to the SEC and its staff related to the resolution of such comments and shall consider in good faith comments proposed by the Buyer for incorporation in such drafts, correspondence and filings.

(v) The Company shall mail to the holders of Common Stock determined as of the record date established for the Shareholders' Meeting a Proxy Statement (the date the Company elects to take such action or is required to take such action, the "Proxy Date"). Prior to the Proxy Date, the Company shall have engaged, at its own expense, an experienced proxy soliciting firm reasonably acceptable to the Buyer, to assist the Company to solicit proxies in connection with the Proxy Statement.

(q) Shareholders' Meeting.

(i) The Company shall duly call, convene and hold the Shareholders' Meeting as promptly as reasonably practicable after the Proxy Date and in any event before the earlier of (i) fifty (50) days following the Proxy Date and (ii) the expiration of any grace period granted by the Nasdaq Listings Qualifications Panel (the "Latest Meeting Date"). The Company shall be permitted to postpone or adjourn the Shareholders' Meeting (but not beyond the Latest Meeting Date), if such postponement is required to allow reasonable additional time for the filing and mailing of any supplemental or amended disclosure (x) which the SEC or its staff (or the NASDAQ or its staff) has instructed the Company is necessary under Law or stock exchange rules or (y) in consultation with the Buyer, as required under Law or stock exchange rules for any supplemental or amended disclosure to be disseminated and reviewed by the holders of Common Stock prior to the Shareholders' Meeting. Buyer agrees to vote its shares in accordance with the recommendation of the Company's Board of Directors. The Company shall take all necessary actions in connection with the calling and holding of such Shareholders' Meeting, including with respect to the preparation, filing and mailing of proxy materials in accordance with the Exchange Act, with respect to which the Buyer shall have the rights of approval and review set forth in Sections 4(p)-(q) hereof. Provided that the shareholders approve the Reverse Split at the Shareholders' Meeting, then immediately following the adoption by the shareholders of the Company of the Amendment at the Shareholders' Meeting (the "Reverse Split Date"), the Company shall issue take all corporate actions necessary to effectuate the Reverse Split, including the filing of an Amendment to the Company's Certificate of Incorporation and all documents necessary to maintain compliance with the listing standards of the Principal Market.

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## 5. REGISTER; TRANSFER AGENT INSTRUCTIONS; LEGEND.

(a) Register. The Company shall maintain at its principal executive offices (or such other office or agency of the Company as it may designate by notice to each holder of Securities), a register for the Common Shares and the Warrants in which the Company shall record the name and address of the Person in whose name the Common Shares and the Warrants have been issued (including the name and address of each transferee), the number of Common Shares held by such Person and the number of Warrant Shares issuable upon exercise of the Warrants held by such Person. The Company shall keep the register open and available at all times during business hours for inspection of the Buyer or its legal representatives.

(b) Transfer Agent Instructions. The Company shall issue irrevocable instructions to the Transfer Agent in the form previously provided to the Company (the “*Irrevocable Transfer Agent Instructions*”) to issue certificates or credit shares to the applicable balance accounts at DTC, without restriction and registered in the name of the Buyer or its respective nominee(s), for the Common Shares and the Warrant Shares in such amounts as specified from time to time by the Buyer to the Company upon delivery of the Common Shares or upon the exercise of the Warrants (as the case may be). No instruction other than the Irrevocable Transfer Agent Instructions referred to in this Section 5(b) will be given by the Company to the Transfer Agent with respect to the Securities (other than instructions in connection with the exercise of the Warrants or otherwise provided for in, or allowed by, any of the Transaction Documents), and the Securities shall otherwise be freely transferable on the books and records of the Company. If the Buyer effects a sale, assignment or transfer of the Securities, the Company shall permit the transfer and shall promptly instruct the Transfer Agent to issue one or more certificates or credit shares to the applicable balance accounts at DTC in such name and in such denominations as specified by the Buyer to effect such sale, transfer or assignment. The Company acknowledges that a breach by it of its obligations hereunder will cause irreparable harm to the Buyer. Accordingly, the Company acknowledges that the remedy at law for a breach of its obligations under this Section 5(b) will be inadequate and agrees, in the event of a breach or threatened breach by the Company of the provisions of this Section 5(b), that the Buyer shall be entitled, in addition to all other available remedies, to an order and/or injunction restraining any breach and requiring immediate issuance and transfer, without the necessity of showing economic loss and without any bond or other security being required.

(c) Certificates and any other instruments evidencing the Securities shall not bear any restrictive or other legend.

## 6. ADDITIONAL CLOSING DELIVERIES OF THE COMPANY.

At the Closing, in addition to its other deliveries required under this Agreement, the Company shall deliver the following to Buyer and the Placement Agent:

(i) The opinion of Troutman Sanders LLP, the Company’s outside counsel, dated as of the Closing Date and addressed to Buyer and the Placement Agent, in substantially the form set forth on Exhibit B;

(ii) A copy of the Irrevocable Transfer Agent Instructions, in the form reasonably acceptable to the Buyer, which has been delivered to and acknowledged in writing (which may be via .pdf e-mail) by the Transfer Agent;

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(iii) A long form certificate evidencing the formation and good standing of the Company in the Company's jurisdiction of formation issued by the Secretary of State (or comparable office) of such jurisdiction of formation as of a date within ten days of the Closing Date;

(iv) A certificate executed by the Secretary of the Company on behalf of the Company, and not in his or her personal capacity, and dated as of the Closing Date, as to copies attached thereto of: (i) the resolutions as adopted by the Company's board of directors and as necessary or appropriate with respect to the issuance of the Securities and the approval of this Agreement and the other Transaction Documents and the terms and conditions hereof and thereof and otherwise in order to give effect hereto and thereto, (ii) the Certificate of Incorporation of the Company and (iii) the Bylaws of the Company, each as in effect at the Closing;

(v) A letter from the Transfer Agent certifying the number of shares of Common Stock outstanding on the Closing Date immediately prior to the Closing;

(vi) A certificate executed by the Chief Executive Officer or Chief Financial Officer of the Company, dated as of the Closing Date, stating on behalf of the Company, and not in his or her personal capacity, that as of the Closing (i) each and every representation and warranty of the Company made in this Agreement and in the other Transaction Documents is true and correct in all material respects as of the date when made and as of the Closing as though originally made at that time, and (ii) that the Company has performed, satisfied and complied in all material respects with the covenants, agreements and conditions required by this Agreement and the other Transaction Documents to be performed, satisfied or complied with by the Company at or prior Closing; and

(vii) Such other documents, instruments or certificates relating to the transactions contemplated by this Agreement and the other Transaction Documents as necessary or appropriate to accomplish the purposes or intents of the issuance of the Securities and the consummation of the transactions contemplated by this Agreement and the other Transaction Documents.

## **7. DAMAGES IN CERTAIN CIRCUMSTANCE AND CERTAIN RELATED MATTERS.**

In the event that the Company shall fail to consummate the Closing as called for by Section 1(b) hereof, for any reason, the Company hereby agrees to and shall defend, indemnify and hold harmless the Buyer from any and all costs, expenses, damages, losses and otherwise, that are incurred by the Buyer as a result of or with respect to the failure of the Company to effectuate the Closing and the transactions contemplated hereby. Without limiting the foregoing, in such event, the Buyer shall have the right to terminate its obligations under this Agreement with respect to itself at any time on or after such failure by the Company, without liability of the Buyer to the Company or any other Person. No such failure or termination of obligations of the Buyer shall affect any obligation of the Company under this Agreement to reimburse the Buyer for the expenses otherwise called for by this Agreement. Nothing contained in this Section 7

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shall be deemed to release any party from any liability for any breach by such party of the terms and provisions of this Agreement or the other Transaction Documents or to impair the right of any party to compel specific performance by any other party of such other party's obligations under this Agreement or the other Transaction Documents.

## 8. MISCELLANEOUS.

(a) Governing Law; Jurisdiction; Jury Trial. All questions concerning the construction, validity, enforcement and interpretation of this Agreement shall be governed by the internal laws of the State of New York, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of New York or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in The City of New York, Borough of Manhattan, for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof to such party at the address for such notices to such party under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall (i) limit or be deemed to limit in any way any right to serve process in any manner permitted by law or (ii) operate, or be deemed to operate, to preclude the Buyer from bringing suit or taking other legal action against the Company in any other jurisdiction to collect on the Company's obligations to the Buyer or to enforce a judgment or other court ruling in favor of the Buyer or (iii) limit, or be deemed to limit, any provision of the Warrants which is contrary to the above. EACH PARTY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE TO, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH OR ARISING OUT OF THIS AGREEMENT OR ANY TRANSACTION CONTEMPLATED HEREBY.

(b) Counterparts. This Agreement may be executed in two or more identical counterparts, all of which shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to the other party. In the event that any signature is delivered by facsimile transmission or by an e-mail which contains a portable document format (.pdf) file of an executed signature page, such signature page shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such signature page were an original thereof.

(c) Headings; Gender; Certain Meanings. The headings of this Agreement are for convenience of reference and shall not form part of, or affect the interpretation of, this Agreement. Unless the context clearly indicates otherwise, each pronoun herein shall be deemed to include the masculine, feminine, neuter, singular and plural forms thereof. The terms "including," "includes," "include" and words of like import shall be construed broadly as if followed by the words "without limitation." The terms "herein," "hereunder," "hereof" and

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words of like import refer to this entire Agreement instead of just the provision in which they are found. When used herein, the words “law,” “rule,” “regulation” and the like means all applicable laws, rules and regulations, domestic or foreign, state, provincial, local or self-regulatory, including without limitation all applicable laws, rules and regulations of or related to the United States, applicable states, the SEC, and the Principal Market.

(d) Severability. If any provision of this Agreement is prohibited by law or otherwise determined to be invalid or unenforceable by a court of competent jurisdiction, the provision that would otherwise be prohibited, invalid or unenforceable shall be deemed amended to apply to the broadest extent that it would be valid and enforceable, and the invalidity or unenforceability of such provision shall not affect the validity of the remaining provisions of this Agreement so long as this Agreement as so modified continues to express, without material change, the original intentions of the parties as to the subject matter hereof and the prohibited nature, invalidity or unenforceability of the provision(s) in question does not substantially impair the respective expectations or reciprocal obligations of the parties or the practical realization of the benefits that would otherwise be conferred upon the parties. The parties will endeavor in good faith negotiations to replace the prohibited, invalid or unenforceable provision(s) with a valid provision(s), the effect of which comes as close as possible to that of the prohibited, invalid or unenforceable provision(s).

(e) Entire Agreement; Amendments. This Agreement, the other Transaction Documents and the schedules and exhibits attached hereto and thereto and the instruments referenced herein and therein supersede all other prior oral or written agreements between the Buyer, the Company, their Affiliates and Persons acting on their behalf solely with respect to the matters contained herein and therein, and this Agreement, the other Transaction Documents, the schedules and exhibits attached hereto and thereto and the instruments referenced herein and therein contain the entire understanding of the parties solely with respect to the matters covered herein and therein. No provision of this Agreement may be amended other than by an instrument in writing signed by the Company and the Buyer. No waiver shall be effective unless it is in writing and signed by an authorized representative of the waiving party. The Company has not, directly or indirectly, made any agreements with the Buyer relating to the terms or conditions of the transactions contemplated by the Transaction Documents except as set forth in the Transaction Documents. Without limiting the foregoing, the Company confirms that, except as set forth in this Agreement, the Buyer has not made any commitment or promise or has no other obligation to provide any financing to the Company, any Subsidiary or otherwise. As a material inducement for the Buyer to enter into this Agreement, the Company expressly acknowledges and agrees that (i) no due diligence investigation conducted by the Buyer or its advisors, if any, or its representatives shall affect the Buyer’s right to rely on, or modify or qualify any of, the Company’s representations and warranties contained in this Agreement or any other Transaction Document, (ii) nothing contained in the Registration Statement, the Prospectus or the Prospectus Supplement shall affect the Buyer’s right to rely on, or modify or qualify any of, the Company’s representations and warranties contained in this Agreement or any other Transaction Document and (iii) unless a provision of this Agreement or any other Transaction Document is expressly preceded by “except as disclosed in the SEC Documents,” nothing contained in any of the SEC Documents shall affect the Buyer’s right to rely on, or modify or qualify any of, the Company’s representations and warranties contained in this Agreement or any other Transaction Document.

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(f) Notices. Any notices, consents, waivers or other communications required or permitted to be given under the terms of this Agreement must be in writing and will be deemed to have been delivered: (i) upon receipt, when delivered personally; (ii) upon receipt, when sent by facsimile (provided confirmation of transmission is mechanically or electronically generated and kept on file by the sending party); and (iii) one Business Day after deposit with an overnight courier service with next day delivery specified, in each case, properly addressed to the party to receive the same. The addresses and facsimile numbers and email addresses for such communications shall be those set forth on Schedule I hereto, or to such other address and/or facsimile number and/or to the attention of such other Person as the recipient party has specified by written notice given to each other party five days prior to the effectiveness of such change. Written confirmation of receipt (A) given by the recipient of such notice, consent, waiver or other communication, (B) mechanically or electronically generated by the sender's facsimile machine containing the time, date, recipient facsimile number and an image of the first page of such transmission or (C) provided by an overnight courier service shall be rebuttable evidence of personal service, receipt by facsimile or receipt from an overnight courier service in accordance with clause (i), (ii) or (iii) above, respectively.

(g) Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their respective successors and assigns, including, any permitted assignee of any of the Securities. The Company shall not assign this Agreement or any rights or obligations hereunder without the prior written consent of the Buyer. The Buyer may assign some or all of its rights hereunder in connection with any transfer of any of its Securities without the consent of the Company, in which event such assignee shall be deemed to be the "Buyer" hereunder with respect to such assigned rights; provided, however, Buyer shall not assign this Agreement if such assignment would violate applicable securities laws.

(h) No Third Party Beneficiaries. This Agreement is intended for the benefit of the parties hereto and their respective permitted successors and assigns, and is not for the benefit of, nor may any provision hereof be enforced by, any other Person, other than the Buyer Indemnitees referred to in Section 8(k) and the Placement Agent in the case of Section 3, Section 6 and as specifically set forth in Section 8(o).

(i) Survival. The representations and warranties contained in this Agreement shall survive Closing and until the earlier to occur of (i) such time as the Buyer no longer holds any Warrants, (ii) the date the Buyer exercises the last Warrant held by the Buyer and (iii) the date the last Warrant held by the Buyer shall have expired; provided; however, that in no event shall such representations and warranties survive for less than one year. The agreements and covenants contained in this Agreement which specify a final time of performance shall survive Closing and until such specified final time of performance of such agreement and covenant. The agreements and covenants contained in this Agreement which do not specify a final time of performance shall survive Closing and until the earlier to occur of (i) such time as the Buyer no longer holds any Warrants, (ii) the date the Buyer exercises the last Warrant held by the Buyer and (iii) the date the last Warrant held by the Buyer shall have expired; provided; however, that in no event shall such agreements and covenants survive for less than one year. To the extent a Warrant is held by an Affiliate of the Buyer, such Warrant shall be considered to be held by the Buyer for the purpose of this Section 8(i).

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(j) Further Assurances. Each party shall do and perform, or cause to be done and performed, all such further acts and things, and shall execute and deliver all such other agreements, certificates, instruments and documents, as any other party may reasonably request in order to carry out the intent and accomplish the purposes of this Agreement and the consummation of the transactions contemplated hereby.

(k) Indemnification.

(i) In consideration of the Buyer's execution and delivery of the Transaction Documents and acquiring the Securities thereunder and in addition to all of the Company's other obligations under the Transaction Documents, the Company shall defend, protect, indemnify and hold harmless the Buyer and each holder of any Securities and all of their stockholders, partners, members, officers, directors, employees and direct or indirect investors and any of the foregoing Persons' agents or other representatives (including, without limitation, those retained in connection with the transactions contemplated by this Agreement) (collectively, the "**Indemnitees**") from and against any and all actions, causes of action, suits, claims, losses, costs, penalties, fees, liabilities and damages, and expenses in connection therewith (irrespective of whether any such Indemnitee is a party to the action for which indemnification hereunder is sought), and including reasonable attorneys' fees and disbursements (collectively, the "**Indemnified Liabilities**"), incurred by any Indemnitee as a result of, or arising out of, or relating to (a) any misrepresentation or breach of any representation or warranty made by the Company in any of the Transaction Documents or (b) any breach of any covenant, agreement or obligation of the Company contained in any of the Transaction Documents. To the extent that the foregoing undertaking by the Company may be unenforceable for any reason, the Company shall make the maximum contribution to the payment and satisfaction of each of the Indemnified Liabilities which is permissible under applicable law.

(ii) Promptly after receipt by an Indemnitee under this Section 8(k) of notice of the commencement of any action or proceeding (including any governmental action or proceeding) involving an Indemnified Liability, such Indemnitee shall, if a claim in respect thereof is to be made against the Company under this Section 8(k), deliver to the Company a written notice of the commencement thereof, and the Company shall have the right to participate in, and, to the extent the Company so desires, to assume control of the defense thereof with counsel mutually satisfactory to the Company and the Indemnitee; provided, however, that an Indemnitee shall have the right to retain its own counsel with the fees and expenses of such counsel to be paid by the Company if: (i) the Company has agreed in writing to pay such fees and expenses; (ii) the Company shall have failed promptly to assume the defense of such Indemnified Liability and to employ counsel reasonably satisfactory to such Indemnitee in any such Indemnified Liability; or (iii) the named parties to any such Indemnified Liability (including any impleaded parties) include both such Indemnitee and the Company, and such Indemnitee shall have been advised by counsel that a conflict of interest is likely to exist if the same counsel were to represent such Indemnitee and the Company (in which case, if such Indemnitee notifies the Company in writing that it elects to employ separate counsel at the expense of the Company, then the Company shall not have the right to assume the defense thereof and such counsel shall be at the expense of the Company), provided further, that in the case of

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clause (iii) above the Company shall not be responsible for the reasonable fees and expenses of more than one separate legal counsel for such Indemnitee. The Indemnitee shall reasonably cooperate with the Company in connection with any negotiation or defense of any such action or Indemnified Liability by the Company and shall furnish to the Company all information reasonably available to the Indemnitee which relates to such action or Indemnified Liability. The Company shall keep the Indemnitee reasonably apprised at all times as to the status of the defense or any settlement negotiations with respect thereto. The Company shall not be liable for any settlement of any action, claim or proceeding effected without its prior written consent, provided, however, that the Company shall not unreasonably withhold, delay or condition its consent. The Company shall not, without the prior written consent of the Indemnitee, consent to entry of any judgment or enter into any settlement or other compromise which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnitee of a release from all liability in respect to such Indemnified Liability or litigation, and such settlement shall not include any admission as to fault on the part of the Indemnitee. Following indemnification as provided for hereunder, the Company shall be subrogated to all rights of the Indemnitee with respect to all third parties, firms or corporations relating to the matter for which indemnification has been made. The failure to deliver written notice to the Company within a reasonable time of the commencement of any such action shall not relieve the Company of any liability to the Indemnitee under this Section 8(k), except to the extent that the Company is materially and adversely prejudiced in its ability to defend such action.

(iii) The indemnification required by this Section 8(k) shall be made by periodic payments of the amount thereof during the course of the investigation or defense, as and when bills are received or Indemnified Liabilities are incurred.

(iv) The indemnity agreement contained herein shall be in addition to (A) any cause of action or similar right of the Indemnitee against the Company or others, and (B) any liabilities the Company may be subject to pursuant to applicable law.

(l) Construction. The language used in this Agreement will be deemed to be the language chosen by the parties to express their mutual intent, and no rules of strict construction will be applied against any party. No specific representation or warranty shall limit the generality or applicability of a more general representation or warranty.

(m) Remedies. The Buyer and each holder of any Securities shall have all rights and remedies set forth in the Transaction Documents and all rights and remedies which such holders have been granted at any time under any other agreement or contract and all of the rights which such holders have under any law. Any Person having any rights under any provision of this Agreement shall be entitled to enforce such rights specifically (without posting a bond or other security), to recover damages by reason of any breach of any provision of this Agreement and to exercise all other rights granted by law. Furthermore, the Company recognizes that in the event that it fails to perform, observe, or discharge any or all of its obligations under the Transaction Documents, any remedy at law may prove to be inadequate relief to the Buyer. The Company therefore agrees that the Buyer shall be entitled to seek specific performance and/or temporary, preliminary and permanent injunctive or other equitable relief from any court of competent

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jurisdiction in any such case without the necessity of proving actual damages and without posting a bond or other security.

(n) Withdrawal Right. Notwithstanding anything to the contrary contained in (and without limiting any similar provisions of) the Transaction Documents, whenever the Buyer exercises a right, election, demand or option under a Transaction Document and the Company does not timely perform its related obligations within the periods therein provided, then the Buyer may rescind or withdraw, in its sole discretion from time to time upon written notice to the Company, any relevant notice, demand or election in whole or in part without prejudice to its future actions and rights.

(o) Acknowledgement. The Buyer acknowledges that no escrow is being used to effectuate the delivery of the Common Shares and the Warrants at the Closing. Accordingly, the Buyer agrees that should the Company fail to deliver the Common Shares and/or the Warrants to the Buyer at the Closing, the Buyer shall have no recourse against the Placement Agent for such failure by the Company; provided, the foregoing shall in no way limit the rights and remedies of the Buyer against the Company. The Placement Agent shall be a third party beneficiary of this Section 8(o).

(p) Payment Set Aside; Currency. To the extent that the Company makes a payment or payments to the Buyer hereunder or pursuant to any of the other Transaction Documents or the Buyer enforces or exercises its rights hereunder or thereunder, and such payment or payments or the proceeds of such enforcement or exercise or any part thereof are subsequently invalidated, declared to be fraudulent or preferential, set aside, recovered from, disgorged by or are required to be refunded, repaid or otherwise restored to the Company, a trustee, receiver or any other Person under any law (including, without limitation, any bankruptcy law, foreign, state or federal law, common law or equitable cause of action), then to the extent of any such restoration the obligation or part thereof originally intended to be satisfied shall be revived and continued in full force and effect as if such payment had not been made or such enforcement or setoff had not occurred. Unless otherwise expressly indicated, all dollar amounts referred to in this Agreement and the other Transaction Documents are in United States Dollars (“**U.S. Dollars**”), and all amounts owing under this Agreement and all other Transaction Documents shall be paid in U.S. Dollars. All amounts denominated in other currencies (if any) shall be converted in the U.S. Dollar equivalent amount in accordance with the Exchange Rate on the date of calculation. “**Exchange Rate**” means, in relation to any amount of currency to be converted into U.S. Dollars pursuant to this Agreement, the U.S. Dollar spot exchange rate as published in the Wall Street Journal on the relevant date of calculation.

*[signature pages follow]*

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The Buyer and the Company have caused this Agreement to be duly executed as of the date first written above.

**COMPANY:**

QUANTUM FUEL SYSTEMS TECHNOLOGIES  
WORLDWIDE, INC.

By: /s/ Bradley J. Timon

Name: Bradley J. Timon

Title: Chief Financial Officer

**BUYER:**

CREDE CG III, LTD.

By: /s/ Terren S. Peizer

Name: Terren S. Peizer

Title: Director

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Schedule I

Notices

If to the Company:

Quantum Fuel System Technologies Worldwide, Inc.  
25242 Arctic Ocean Drive  
Lake Forest, CA 92630 USA  
Telephone: (949) 399-4500  
Facsimile: (949) 930-3401  
Attention: Bradley J. Timon

with a copy (for informational purposes only) to:

Quantum Fuel Systems Technologies Worldwide, Inc.  
19500 Hall Road, Suite 102  
Clinton Township, MI 48038  
Telephone: (586) 948-9534  
Facsimile: (586) 948-9537  
Attention: Kenneth R. Lombardo, General Counsel

If to the Transfer Agent:

Broadridge Corporate Issuer Solutions, Inc.  
1717 Arch St., Suite 1300  
Philadelphia, PA 19103  
Telephone: (855) 793-5069  
Facsimile: (215) 553-5402  
Attention: Kevin Shinkunas

If to the Buyer, to:

Crede CG III, Ltd.  
Clarendon House  
2 Church Street  
Hamilton HM 11, Bermuda  
Telephone: (310) 444-4333  
Facsimile: (310) 444-4394  
Attention: Patricia Aguirre

with a copy (for informational purposes only) to:

Dentons US LLP  
1221 Avenue of the Americas  
New York, New York 10020-1089  
Telephone: (212) 768-6700  
Facsimile: (212) 768-6800  
Attention: S. Elizabeth Foster, Esq.

**Quantum Technologies to Raise \$3.0 Million in Registered Direct Offering**

LAKE FOREST, Calif., May 16, 2013 /PRNewswire/ -- Quantum Fuel Systems Technologies Worldwide, Inc. (NASDAQ: QTWW) (the "Company"), a global leader in natural gas storage systems, integration and vehicle system technologies, today announced that it has agreed to sell common stock and warrants for gross proceeds of \$3,000,000 in a registered direct offering (the "Offering") with Crede CG III, Ltd., a wholly-owned subsidiary of Crede Capital Group, LLC ("Crede").

Under the Offering, the Company will issue to Crede 4,918,032 shares of common stock and a warrant to initially purchase up to an aggregate of 2,950,819 shares of common stock. The purchase price per share of common stock equaled the Company's consolidated closing bid price on May 15, 2013 of \$0.61. The warrant has a five-year term, and is immediately exercisable at a price of \$0.671 per share. The holder of the warrant may, at any time after 30 days from the issuance of the warrant until its expiration, elect to exchange all or part of the warrant for, at the Company's option, cash or shares of common stock (provided certain conditions are satisfied), or a combination thereof, equal to the value of the warrant at the time of the exchange based on a prescribed Black-Scholes formula. If the number of shares of common stock required to settle the exchange would exceed 19.99% of the issued and outstanding shares prior to the closing of the Offering, then the value of the shares in excess of such limit may be settled by the Company in cash or by delivery of a one-year 10% unsecured promissory note. The holder may not exchange the warrant unless the trading price for a share of the Company's common stock is below the warrant's exercise price. The warrant also provides that, under certain circumstances, the Company will have the ability to cause the holder to exercise the warrant for cash. The warrant also provides that if the Company's common stock is delisted from the NASDAQ Capital Market, then the number of shares of common stock underlying the warrant at the time of such delisting shall automatically be adjusted upward by multiplying the number of shares underlying the warrant at the time of the delisting by 116.667%.

Roth Capital Partners, LLC (the "Placement Agent") served as the Company's exclusive placement agent in connection with the Offering and will receive a cash fee of \$210,000, which represents 7.0% of the gross proceeds received by the Company from the Offering.

The net proceeds realized by the Company in connection with the Offering, after deducting the Placement Agent's fee and other Offering expenses, are expected to be approximately \$2.7 million. The Company intends to use the net proceeds from the Offering for working capital and other general corporate purposes.

The common shares and warrant described above and the shares issuable upon exercise of the warrant are being offered and sold pursuant to a prospectus supplement dated as of May 16, 2013, which has been filed with the Securities and Exchange Commission ("SEC") in connection with a takedown from the Company's shelf registration statement on Form S-3 (File No. 333-176772), which became effective on September 29, 2011, and the base prospectus dated September 29, 2011. Copies of the prospectus supplement, together with the accompanying prospectus, can be obtained at the SEC's website at <http://www.sec.gov>, from

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the Placement Agent at 888 San Clemente Drive, Newport Beach, CA 92660, or by telephone at (949)720-7194.

The Offering is expected to close on May 16, 2013, subject to the satisfaction of customary closing conditions.

This press release does not constitute an offer to sell or the solicitation of an offer to buy any securities of the Company in this offering. There shall not be any offer, solicitation of an offer to buy, or sale of securities in any state or jurisdiction in which such an offering, solicitation, or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction. Any offering will be made only by means of a prospectus, including a prospectus supplement, forming a part of the effective registration statement.

In connection with and immediately prior to the closing of the Offering, the Company has terminated the At The Market Offering Agreement with Ascendant Capital Markets, LLC dated December 28, 2012. The Company has sold 4,086,612 shares under the At The Market Offering Agreement for aggregate gross proceeds of \$2,611,334 (excluding commissions, fees and expenses).

**About Quantum:**

Quantum Fuel Systems Technologies Worldwide, Inc. is a leader in the innovation, development and production of natural gas fuel storage systems and the integration of vehicle system technologies including engine and vehicle control systems and drivetrains. Quantum produces one of the most innovative, advanced, and light-weight compressed natural gas storage tanks in the world and supplies these tanks, in addition to fully-integrated natural gas storage systems, to truck and automotive OEMs and aftermarket and OEM truck integrators. Quantum provides low emission and fast-to-market solutions to support the integration and production of natural gas fuel and storage systems, hybrid, fuel cell, and specialty vehicles, as well as modular, transportable hydrogen refueling stations. Quantum is headquartered in Lake Forest, California, and has operations and affiliations in the United States, Canada, and India.

**Forward Looking Statements:**

This press release contains forward looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements included in this report, other than those that are historical, are forward-looking statements and can generally be identified by words such as “may,” “could,” “will,” “should,” “assume,” “expect,” “anticipate,” “plan,” “intend,” “believe,” “predict,” “estimate,” “forecast,” “outlook,” “potential,” or “continue,” or the negative of these terms, and other comparable terminology.

Various risks and other factors including those risks and uncertainties identified in the “Risk Factors” section of the prospectus supplement we filed with the SEC on May 16, 2013 could cause actual results and actual events that occur, to differ materially from those contemplated by the forward-looking statements.

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Many of the risk factors are beyond our ability to control or predict. You should not unduly rely on any of our forward-looking statements. These statements are made only as of this press release. Except as required by law, we are not obligated to publicly release any revisions to these forward-looking statements to reflect future events or developments. All subsequent written and oral forward-looking statements attributable to us and persons acting on our behalf are qualified in their entirety by the cautionary statements contained herein or in our public filings.

More information about the products and services of Quantum can be found at <http://www.qtw.com/> or you may contact:

Brion D. Tanous  
CleanTech IR, Inc.  
Email: [btanous@cleantech-ir.com](mailto:btanous@cleantech-ir.com)  
310-541-6824

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