

**SECOND AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF**

ADVANCED EMISSIONS SOLUTIONS, INC.

ADVANCED EMISSIONS SOLUTIONS, INC. (the “**Corporation**”) was incorporated under the laws of the State of Delaware on March 10, 2011.

**ARTICLE I
NAME**

The name of the Corporation is ADVANCED EMISSIONS SOLUTIONS, INC.

**ARTICLE II
REGISTERED OFFICES**

The address of its registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, 19801. The name of its registered agent is The Corporation Trust Company.

**ARTICLE III
PURPOSE**

The nature of the business or purposes to be conducted or promoted by the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware (the “**DGCL**”).

**ARTICLE IV
AUTHORIZED CAPITAL STOCK**

The total number of shares of common stock which the corporation is authorized to issue is 100,000,000 at a par value of \$.001 per share (the “**Common Stock**”) and the total number of shares of preferred stock which the corporation is authorized to issue is 50,000,000 at a par value of \$.001 per share (“**Preferred Stock**”).

The board of directors is hereby expressly authorized to provide, out of the unissued shares of Preferred Stock, for one or more series of Preferred Stock and, with respect to each such series, to fix the number of shares constituting such series and the designation of such series, the voting powers, if any, of the shares of such series, and the preferences and relative, participating, optional or other special rights, if any, and any qualifications, limitations or restrictions thereof, of the shares of such series. The powers, preferences and relative, participating, optional and other special rights of each series of Preferred Stock, and the qualifications, limitations or restrictions thereof, if any, may differ from those of any and all other series at any time outstanding.

Except as otherwise provided by law or by the resolution or resolutions adopted by the board of directors designating the rights, powers and preferences of any series of Preferred Stock, the Common Stock shall have the exclusive right to vote for the election of directors and for all other purposes. Each share of Common Stock shall have one vote on each matter properly submitted to the stockholders of the Corporation for their vote, and the holders of the Common Stock shall vote together as a single class.

ARTICLE V

CERTAIN DEFINITIONS

"Affiliate or Associate" shall have the respective meanings ascribed to such terms in Rule 12b-2 of the General Rules and Regulations under the Securities Exchange Act of 1934, as in effect on March 11, 2011.

"Announcement Date" shall have the meaning set forth in Section 6.02(b)(i).

"Beneficial Owner or beneficially owned" shall have the meaning ascribed to such term in Rule 13d-3 of the General Rules and Regulations of the Securities Exchange Act of 1934, as amended. In addition, a Person shall be the "Beneficial Owner" of any voting stock which such Person or any of its Affiliates or Associates has (a) the right to acquire (whether such right is exercisable immediately or only after the passage of time), pursuant to any agreement, arrangement or understanding or upon the exercise of conversion rights, exchange rights, warrants or options or otherwise or (b) the right to vote pursuant to any agreement, arrangement or understanding (but neither such Person nor any such Affiliate or Associate shall be deemed to be the Beneficial Owner of any shares of voting stock solely by reason of a revocable proxy or consent granted for a particular meeting of stockholders, pursuant to a public solicitation of proxies or consents for such meeting, and with respect to which shares neither such Person nor any such Affiliate or Associate is otherwise deemed the Beneficial Owner). Notwithstanding the foregoing, a Person shall not be a "Beneficial Owner" of any voting stock for the purposes of this Article V which such person may have the right to acquire pursuant to the rights agreement from time to time in effect and the rights issued thereunder.

"Business Combination" shall mean any of the transactions described in any one or more of clauses (a) through (f) of Section 6.01.

"Commencement Date" shall have the meaning set forth in Section 6.02(b)(i).

"Continuing Director" means any member of the Board who is unaffiliated with the Interested Stockholder and was a member of the Board before the Interested Stockholder became an Interested Stockholder, and any director who is thereafter chosen to fill any vacancy on the Board or who is elected and who, in either event, is unaffiliated with the Interested Stockholder and in connection with his or her initial assumption of office is recommended for appointment or election by a majority of Continuing Directors then on the Board.

"Determination Date" shall have the meaning set forth in Section 6.02(b)(i).

"Entity" means a corporation, partnership, joint venture, limited liability company, trust, unincorporated organization, association or other similar entity.

"Excluded Preferred Stock" means any series of Preferred Stock with respect to which a majority of the Continuing Directors have approved a Preferred Stock Designation creating such series that expressly provides that the provisions of Article VI shall not apply.

"Fair Market Value" shall mean (a) in the case of stock, the highest closing sale price during the 30-day period immediately preceding the date in question of a share of such stock on the Composite Tape for New York Stock Exchange listed stocks, or, if such stock is not quoted on the Composite Tape, on the New York Stock Exchange, or, if such stock is not listed on such exchange, on the principal U.S. securities exchange registered under the Securities Exchange Act of 1934, as amended, on which such stock is listed, or, if such stock is not listed on any such exchange, the highest closing sale price during the 30-day period immediately preceding the date in question of a share of such stock on the National Association of Securities Dealers, Inc. Automated Quotation System, or any system then in use, or if no such quotations are available, the fair market value on the date in question of a share of such stock as determined by the Board in accordance with Section 6.03; and (b) in the case of property other than cash or stock, the fair market value of such property on the date in question as determined by the Board in accordance with Section 6.03.

"Interested Stockholder" shall mean any Person (other than the Corporation or any Subsidiary and other than any profit-sharing, employee stock ownership or other employee benefit plan of the Corporation or any Subsidiary or any trustee or fiduciary with respect to any such plan or holding voting stock for the purpose of funding any such plan or funding other employee benefits for employees of the Corporation or any Subsidiary when acting in such capacity) who or which: (a) itself, or along with its Affiliates, is the Beneficial Owner, directly or indirectly, of more than 10% of the then outstanding voting stock; or (b) is an Affiliate of the Corporation and at any time within the two-year period immediately prior to the date in question was itself, or along with its Affiliates, the Beneficial Owner, directly or indirectly, of 10% or more of the then outstanding voting stock; or (c) is an assignee of or has otherwise succeeded to any voting stock which was at any time within the two-year period immediately prior to the date in question beneficially owned by an Interested Stockholder, if such assignment or succession shall have occurred in the course of a transaction or series of transactions not involving a public offering within the meaning of the Securities Act of 1933, as amended. For the purpose of determining whether a Person is an Interested Stockholder, the number of shares of voting stock deemed to be outstanding shall include shares deemed beneficially owned by the Interested Stockholder, but shall not include any other shares of voting stock which may be issuable pursuant to any agreement, arrangement or understanding, or upon exercise of conversion rights, warrants or options or otherwise.

"Person" means an individual, governmental or regulatory body or Entity.

"Subsidiary" shall mean any Entity of which securities or other ownership interests having ordinary voting power to elect a majority of the board of directors or other persons performing similar functions are at any time directly or indirectly owned by the Corporation.

ARTICLE VI HIGHER VOTE REQUIRED FOR CERTAIN BUSINESS COMBINATIONS

Section 6.01 Higher Vote Required for Certain Business Combinations. In addition to any affirmative vote required by applicable law or this Amended and Restated Certificate of Incorporation, and except as otherwise expressly provided in Section 6.02 below:

(a) any merger or consolidation of the Corporation or any Subsidiary with any Interested Stockholder or any other Entity (whether or not an Interested Stockholder) which is, or after such merger or consolidation would be, an Affiliate of an Interested Stockholder;

(b) any sale, lease, exclusive license, exchange, mortgage, pledge, transfer or other disposition (in one transaction or a series of transactions) to or with any Interested Stockholder or any Affiliate of an Interested Stockholder, of any assets of the Corporation or any Subsidiary having an aggregate Fair Market Value of more than the lower of either (i) 10% of the market capitalization of the Corporation's stock, excluding the value of stock held by any Interested Stockholder and any Affiliate of an Interested Stockholder, at any point during any such transaction or series of transactions or (ii) 10% of the value of the Corporation's assets as such value is reported on the most recent balance sheet filed by the Corporation with the Securities and Exchange Commission ("SEC") in accordance with generally accepted accounting principles ("GAAP");

(c) the issuance or transfer by the Corporation or any Subsidiary (in one transaction or a series of transactions) of any securities of the Corporation or any Subsidiary to any Interested Stockholder or any Affiliate of an Interested Stockholder, in exchange for cash, securities or other property (or a combination thereof) having an aggregate Fair Market Value of more than the lower of either (i) 10% of the market capitalization of the Corporation's stock, excluding the value of stock held by any Interested Stockholder and any Affiliate of an Interested Stockholder, at any point during any such transaction or series of transactions or (ii) 10% of the value of the Corporation's assets as such value is reported on the most recent balance sheet filed by the Corporation with the SEC in accordance with GAAP;

(d) the adoption of any plan or proposal for the liquidation or dissolution of the Corporation proposed by or on behalf of an Interested Stockholder or any Affiliate of an Interested Stockholder;

(e) any reclassification of securities (including any reverse stock split), recapitalization of the Corporation or any merger or consolidation of the Corporation with any of its Subsidiaries or any other transaction (whether or not an Interested Stockholder is a party thereto) which has the effect, directly or indirectly, of increasing the proportionate share of the outstanding shares of any class of equity or convertible securities of the Corporation or any Subsidiary which are directly or indirectly owned by any Interested Stockholder or any Affiliate of an Interested Stockholder; or

(f) any agreement, contract or other arrangement providing for any one or more of the actions specified in the foregoing (a) to (e).

shall require, except as otherwise prohibited by applicable law, the affirmative vote of the holders of at least a majority of the voting power of the then outstanding voting stock, voting together as a single class, including the affirmative vote of the holders of at least a majority of the voting power of the then outstanding voting stock not owned directly or indirectly by any Interested Stockholder or any Affiliate of an Interested Stockholder. Such affirmative vote shall be required notwithstanding the fact that no vote may be required, or that a lesser percentage may be permitted, by applicable law or in any agreement with any national securities exchange or otherwise.

Section 6.02 When Higher Vote Not Required. The provisions of Section 6.01 shall not be applicable to any particular Business Combination, and such Business Combination shall require only such affirmative vote as is required by applicable law or any other provision of this Amended and Restated Certificate of Incorporation, if the conditions specified in either of the following paragraphs (a) or (b) are met:

(a) The Business Combination has been approved by a majority of the Continuing Directors; or

(b) All of the following conditions have been met:

(i) The aggregate amount, as of the date (the "**Consummation Date**") of the consummation of the Business Combination, of (A) the cash and (B) the Fair Market Value of the consideration other than cash to be received per share by holders of Common Stock in such Business Combination shall be at least equal to the higher of the following (in each case appropriately adjusted in the event of any stock dividend, stock split, combination of shares or similar event): (x) (if applicable) the highest per share price (including any brokerage commissions, transfer taxes and soliciting dealers' fees) paid by the Interested Stockholder or any of its Affiliates for any shares of Common Stock acquired by them (1) within the two-year period immediately prior to the date of the first public announcement of the proposal of the Business Combination (the "**Announcement Date**"), or (2) in any transaction in which the Interested Stockholder became an Interested Stockholder (the "**Determination Date**"), whichever is higher; (y) the Fair Market Value per share of Common Stock on the Announcement Date or the Determination Date, whichever is higher; and (z) (if applicable) the price per share equal

to the Fair Market Value per share of Common Stock, multiplied by the ratio of (1) the highest per share price (including any brokerage commissions, transfer taxes and soliciting dealers' fees) paid by the Interested Stockholder for any shares of Common Stock acquired by it within the two-year period immediately prior to the Announcement Date to (2) the Fair Market Value per share of Common Stock on the first day in such two-year period upon which the Interested Stockholder acquired any shares of Common Stock;

(ii) The aggregate amount, as of the Consummation Date, of (A) the cash and (B) the Fair Market Value of the consideration other than cash to be received per share by holders of shares of any class or series (other than Common Stock or Excluded Preferred Stock) of outstanding capital stock shall be at least equal to the highest of the following (in each case appropriately adjusted in the event of any stock dividend, stock split, combination of shares or similar event), it being intended that the requirements of this paragraph (b)(ii) shall be required to be met with respect to every such class or series of outstanding capital stock whether or not the Interested Stockholder or any of its Affiliates has previously acquired any shares of a particular class or series of capital stock: (w) (if applicable) the price per share equal to the Fair Market Value per share of such class of capital stock, multiplied by the ratio of (1) the highest per share price (including any brokerage commissions, transfer taxes and soliciting dealers' fees) paid by the Interested Stockholder for any shares of such class of capital stock acquired by it within the two-year period immediately prior to the Announcement Date to (2) the Fair Market Value per share of such class of capital stock on the first day in such two-year period upon which the Interested Stockholder acquired any shares of such class of capital stock; (x) (if applicable) the highest per share price (including any brokerage commissions, transfer taxes and soliciting dealers' fees) paid by the Interested Stockholder or any of its Affiliates for any shares of such class or series of capital stock acquired by them (1) within the two-year period immediately prior to the Announcement Date or (2) in any transactions in which it became an Interested Stockholder, whichever is higher; (y) the Fair Market Value per share of such class or series of capital stock on the Announcement Date or on the Determination Date, whichever is higher; and (z) the highest preferential amount per share, if any, to which the holders of shares of such class or series of capital stock would be entitled in the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation;

(iii) The consideration to be received by holders of a particular class of outstanding voting stock (including Common Stock and other than Excluded Preferred Stock) shall be in cash or in the same form as the Interested Stockholder has previously paid for shares of such class of voting stock. If the Interested Stockholder has paid for shares of any class of voting stock with varying forms of consideration, the form of consideration for such class of voting stock shall be either cash or the form used to acquire the largest number of shares of such class of voting stock previously acquired by it;

(iv) After such Interested Stockholder has become an Interested Stockholder and prior to the consummation of such Business Combination: (A) there shall have been no failure to declare and pay at the regular date therefor any full quarterly dividends (whether or not cumulative) on any outstanding Preferred Stock, except as approved by a majority of the Continuing Directors; (B) there shall have been no reduction in the annual rate of dividends paid on the Common Stock (except as necessary to reflect any subdivision of the Common Stock), except as approved by a majority of the Continuing Directors; (C) there shall have been an increase in the annual rate of dividends as necessary fully to reflect any recapitalization (including any reverse stock split) or any similar reorganization which has the effect of reducing the number of outstanding shares of the Common Stock, unless the failure so to increase such annual rate is approved by a majority of the Continuing Directors; and (D) such Interested Stockholder shall not have become the Beneficial Owner of any additional voting stock except as part of the transaction which results in such Interested Stockholder becoming an Interested Stockholder;

(v) After such Interested Stockholder has become an Interested Stockholder, such Interested Stockholder shall not have received the benefit, directly or indirectly (except proportionately as a stockholder), of any loans, advances, guarantees, pledges or other financial assistance or any tax credits or other tax advantages provided by the Corporation, whether in anticipation of, or in connection with, such Business Combination or otherwise; and

(vi) A proxy or information statement describing the proposed Business Combination and complying with the requirements of the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder (or any subsequent provisions replacing such act, rules or regulations) shall have been mailed to stockholders of the Corporation at least 30 days prior to the consummation of such Business Combination (whether or not such proxy or information statement is required to be mailed pursuant to such act or subsequent provisions).

Section 6.03 Determination by the Continuing Directors. The Continuing Directors of the Corporation shall have the power and duty to determine for the purposes of this Article VI on the basis of information known to them after reasonable inquiry, all facts necessary to determine compliance with this Article VI including, without limitation (a) whether a Person is an Interested Stockholder; (b) the number of shares of capital stock beneficially owned by any Person; (c) whether a Person is an Affiliate or Associate of another; (d) whether the applicable conditions set forth in Section 6.02 have been met with respect to any Business Combination; (e) the Fair Market Value of stock or other property; and (f) whether the assets that are the subject of any Business Combination have, or the consideration to be received for the issuance or transfer of securities by the Corporation or any Subsidiary in any Business Combination has, an aggregate Fair Market Value of more than the lower of either (i) 10% of the market capitalization of the Corporation's stock, excluding the value of stock held by any

Interested Stockholder and any Affiliate of an Interested Stockholder, at any point during any such transaction or series of transactions or (ii) 10% of the value of the Corporation's assets as such value is reported on the most recent balance sheet filed by the Corporation with the SEC in accordance with GAAP. Any such determination made in good faith shall be binding and conclusive on all parties.

Section 6.04 No Effect on Fiduciary Obligations of Interested Stockholders. Nothing contained in this Article VI shall be construed to relieve any Interested Stockholder from any fiduciary obligation imposed by applicable law.

Section 6.05 Amendment or Repeal. Notwithstanding any other provisions of this Amended and Restated Certificate of Incorporation or the Bylaws (and notwithstanding the fact that a lesser percentage may be permitted by applicable law, this Amended and Restated Certificate of Incorporation or the Bylaws), but in addition to any affirmative vote of the holders of any particular class of the voting stock required by applicable law or this Amended and Restated Certificate of Incorporation, the affirmative vote of the holders of at least a majority of the voting power of the shares of the then outstanding voting stock voting together as a single class, including the affirmative vote of the holders of at least a majority of the voting power of the then outstanding voting stock not owned directly or indirectly by any Interested Stockholder or any Affiliate of any Interested Stockholder, shall be required to amend, repeal or adopt any provisions inconsistent with, this Article VI or Article V.

ARTICLE VII DIRECTOR ELECTION

Unless and except to the extent that the bylaws of the Corporation (the "**Bylaws**") so require, the election of directors of the Corporation need not be by written ballot.

ARTICLE VIII DIRECTOR LIABILITY

To the fullest extent permitted by law, a director of the Corporation shall not be personally liable to the Corporation or to its stockholders for monetary damages for any breach of fiduciary duty as a director. No amendment to, modification of or repeal of this Article VIII shall apply to or have any effect on the liability or alleged liability of any director of the Corporation for or with respect to any acts or omissions of such director occurring prior to such amendment.

ARTICLE IX DIRECTOR INDEMNIFICATION

The Corporation shall indemnify, advance expenses, and hold harmless, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, any

person (a "**Covered Person**") who was or is made or is threatened to be made a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (a "**Proceeding**"), by reason of the fact that he or she, or a person for whom he or she is the legal representative, is or was a director or officer of the Corporation or, while a director or officer of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees) reasonably incurred by such Covered Person. Notwithstanding the preceding sentence, except for claims for indemnification (following the final disposition of such Proceeding) or advancement of expenses not paid in full, the Corporation shall be required to indemnify a Covered Person in connection with a Proceeding (or part thereof) commenced by such Covered Person only if the commencement of such Proceeding (or part thereof) by the Covered Person was authorized in the specific case by the Board of Directors of the Corporation. Any amendment, repeal or modification of this Article IX shall not adversely affect any right or protection hereunder of any person in respect of any act or omission occurring prior to the time of such repeal or modification.

ARTICLE X BYLAWS

In furtherance and not in limitation of the powers conferred by statute, the board of directors is expressly empowered to adopt, amend or repeal bylaws of the Corporation. Any adoption, amendment or repeal of the bylaws of the Corporation by the board of directors shall require the approval of a majority of the entire board of directors. Except as otherwise required by law or this Amended and Restated Certificate of Incorporation, the stockholders shall also have the power to adopt, amend or repeal any provision of the bylaws of the Corporation with the affirmative vote of the holders of at least a majority of the voting power of all of the then outstanding shares of the capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class. Notwithstanding anything to the contrary in this Amended and Restated Certificate of Incorporation, in addition to the holders of any class or series of stock of the corporation required by law or by this Amended and Restated Certificate of Incorporation, the affirmative vote of the holders of at least a majority of the voting power of the shares of the then outstanding voting stock voting together as a single class, including the affirmative vote of the holders of at least a majority of the voting power of the then outstanding voting stock not owned directly or indirectly by any Interested Stockholder or any Affiliate of any Interested Stockholder, shall be required to amend, repeal or adopt any provisions inconsistent with, this Article X of this Amended and Restated Certificate of Incorporation.

**ARTICLE XI
AMENDMENT OF CERTIFICATE OF INCORPORATION**

The Corporation shall have the right, subject to any express provisions or restrictions contained in the Amended and Restated Certificate of Incorporation of the Corporation or the Bylaws, from time to time, to amend the Amended and Restated Certificate of Incorporation or any provision thereof in any manner now or hereafter provided by law, and all rights and powers of any kind conferred upon a director or stockholder of the Corporation by the Amended and Restated Certificate of Incorporation or any amendment thereof are conferred subject to such right.

**ARTICLE XII
OPT-OUT OF RESTRICTIONS ON BUSINESS COMBINATIONS WITH
INTERESTED STOCKHOLDERS.**

The Corporation shall not be governed by or subject to Section 203 of the DGCL.

**ARTICLE XIII
WRITTEN CONSENT**

Any action to be taken at any annual or special meeting of stockholders may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action to be so taken, are signed by all of the holders of outstanding stock entitled to vote with respect to the subject matter thereof and delivered (by hand or by certified or registered mail, return receipt requested) to the Corporation by delivery to its registered office in the State of Delaware, its principal place of business or an officer or agent of the Corporation having custody of the books in which proceedings of meetings of stockholders are recorded.

**ARTICLE XIV
EFFECTIVE DATE AND TIME**

The effective date and time of this Certificate is July 1, 2013 at 12:01 a.m. Eastern time.

[Remainder of page intentionally left blank]

I, The Undersigned, for the purpose of amending and restating the Certificate of Incorporation of Advanced Emissions Solutions, Inc. under the laws of the State of Delaware, do make, file and record this Amended and Restated Certificate, and do certify that the facts herein stated are true, and I have accordingly hereunto set my hand this 25th day of June, 2013.

Advanced Emissions Solutions, Inc.:

By: /s/ Mark H. McKinnies
Name: Mark H. McKinnies
Title: Senior Vice President, Chief Financial
Officer, Treasurer and Secretary