

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4882095

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
	Name	Execution Date
	ADA ENVIRONMENTAL SOLUTIONS, LLC	10/18/2011
RECEIVING PARTY DATA		
Name:	ADA-ES, INC.	
Street Address:	8100 SOUTHPARK WAY	
Internal Address:	UNIT B	
City:	LITTLETON	
State/Country:	COLORADO	
Postal Code:	80120	
PROPERTY NUMBERS Total: 1		
	Property Type	Number
	Application Number:	15934571
CORRESPONDENCE DATA		
Fax Number:	(303)863-0223	
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>		
Phone:	303-863-9700	
Email:	rreil@sheridanross.com	
Correspondent Name:	SHERIDAN ROSS PC	
Address Line 1:	1560 BROADWAY	
Address Line 2:	SUITE 1200	
Address Line 4:	DENVER, COLORADO 80202	
ATTORNEY DOCKET NUMBER:	3791-13-CON-3	
NAME OF SUBMITTER:	MICHAEL J. INCORVIA	
SIGNATURE:	/Michael J. Incorvia/	
DATE SIGNED:	03/23/2018	
Total Attachments: 13		
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**INTELLECTUAL PROPERTY ASSIGNMENT
AND RESIDUAL LICENSE AGREEMENT**

This INTELLECTUAL PROPERTY ASSIGNMENT AND RESIDUAL AGREEMENT ("**IP Assignment and License**"), effective as of October 18, 2011, is made by ADA Environmental Solutions LLC, a Colorado limited liability company (as "**Assignor**") in favor of ADA-ES, Inc., a Colorado corporation ("**Assignee**") and by Assignee acting as licensor ("**Licensor**") in favour of Assignor, as licensee ("**Licensee**").

Recitals

WHEREAS, Assignor is the current owner of certain intellectual property consisting of unregistered trademarks, copyrights and those patents and patent applications listed on the Schedules hereto, as well as related rights consisting of know-how and trade secrets (collectively the "**IP Assets**");

WHEREAS, Assignor, as the wholly owned subsidiary of Assignee, has permitted Assignee access to and the unfettered right to use the IP Assets as Assignee has desired, including allowing Assignee to license the IP Assets to third parties as it deemed appropriate, and

WHEREAS the parties deem Assignee to be the holder of the following with regard to the IP Assets: An exclusive, perpetual, irrevocable, fully paid-up and royalty-free license (with the right to sublicense) to the IP Assets, with the right to make, have made, use, lease, sell, offer to sell, import, export, and otherwise transfer the IP Assets, and to practice any method or process and use any product or process involved in the manufacture or use thereof throughout the world (collectively the "**IP Assets License**").

WHEREAS, to formalize the relationship that exists between Assignor and Assignee, Assignor has agreed to transfer, convey and assign all of its right, title, and interest in and to the IP Assets and to terminate the IP Assets License to Assignee its successors, legal representatives and future assigns;

WHEREAS, Assignee, acting in the capacity of Licensor, has agreed to grant a non-exclusive, perpetual, irrevocable, fully paid-up and royalty-free license (with the right to sublicense) to the IP Assets to Assignor, as Licensee, with the right to practice any method or process and use any product or process involved in the manufacture or use thereof throughout the world, subject, however, to any rights previously granted or which may in the future be granted to any third party by Licensor that restrict or prohibit such rights or uses by Licensee (collectively the "**IP Assets Residual License**"); and

WHEREAS, Assignor has agreed to execute and deliver this IP Assignment and License to Assignee to evidence the assignment being made hereby, and for recording with national, federal and state government authorities including, but not limited to the US Patent and Trademark Office and the US Copyright Office with respect to individual patents, registered or unregistered trademarks and copyrights, applications for the foregoing and any exclusive copyright licenses.

NOW THEREFORE, for Five Dollars (\$5.00) in hand paid, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by Assignor, Assignor agrees as follows:

1. Assignment. Assignor hereby conveys, transfers and assigns unto Assignee all of Assignor's right, title and interest in and to the following IP Assets:

- a. the patents and patent applications set forth in Schedule 1 hereto and all issuances, divisions, continuations, continuations-in-part, reissues, extensions, re-examinations, renewals, and international and foreign counterparts thereof (the "**Patents**");
- b. the trademarks set forth in Schedule 2 hereto, together with the goodwill symbolized thereby and all issuances, extensions and renewals thereof (the "**Trademarks**"); provided that, in the event there are any United States intent-to-use trademark applications included in the Trademarks, and solely to the extent and during the period that the assignment thereof would impair, under applicable federal law, the registrability of such applications or the validity or enforceability of registrations issuing from such applications, the transfer of such applications hereunder shall not be effective until after such period has expired;
- c. all copyrights owned by Assignor, and all issuances, extensions and renewals thereof (the "**Copyrights**");
- d. all know-how, trade secrets, and confidential or proprietary information that is owned or controlled by Assignor that is related to the Patents and necessary to allow the claims included in the Patents to be practiced or otherwise exploited, including all ideas, software, technical information, data, process technology, plans, drawings and blue prints (collectively, "**Trade Secrets**");
- e. all rights of any kind whatsoever of Assignor accruing under any of the Patents, Trademarks, Copyrights or Trade Secrets, as provided by under applicable law of any jurisdiction, by international treaties and conventions and otherwise throughout the world;

- f. any and all royalties, fees, income, payments and other proceeds now or hereafter due or payable with respect to any and all of the foregoing; and
- g. any and all claims, with respect to any of the foregoing, for damages and injunctive relief for past, present and future infringement, dilution, misappropriation, violation, misuse, breach or default, with the right but no obligation to sue for such legal and equitable relief and to collect, or otherwise recover, any such damages.

2. Recordation. Assignor authorizes the Commissioner for Patents, the Commissioner for Trademarks and the Register of Copyrights and any other national, federal and state government officials to record and register this IP Assignment upon request by Assignee.

3. Grant of Residual License. Assignee, acting in the capacity of Licensor, hereby grants to Licensee the IP Residual License, consisting of a non-exclusive, perpetual, irrevocable, fully paid-up and royalty-free license (with the right to sublicense) to the IP Assets to Assignor, as Licensee, with the right to practice any method or process and use any product or process involved in the manufacture or use thereof throughout the world, subject, however, to any rights previously granted, or which may in the future be granted, to any third party by Licensor, which restrict such rights or uses by Licensee. Licensee shall obtain the prior written consent of Licensor prior to using or granting any sublicense to use the IP Assets to any person, which Licensor may refuse in its sole and absolute discretion.

4. Representations and Warranties of Assignor and Licensee.

(a) Ownership and Right to Use. Assignor is the owner or licensee of all right, title and interest in and to the IP Assets, free and clear of all liens and encumbrances, except for such liens and encumbrances as may exist under any of the Contracts (as hereafter defined), and Assignor has the right to use without payment to a third party all of the IP Assets, other than such payments as may be due under any of the Contracts. Except as previously disclosed in writing to Assignee, there are no outstanding and, to Assignor's knowledge, threatened disputes or disagreements with respect to Assignor's right, title and interest in and to the IP Assets.

(b) Due Authorization. Assignor is organized, existing and in good standing under the laws of the State of Colorado, and all actions necessary on the part of Assignor have been taken to authorize the entry into of this IP Assignment and the consummation of the transactions authorized hereby.

(c) Contracts. To Licensee's knowledge it does not currently have any contracts between it and any third party that grant rights to such third party that are restricted by the Licensors Contracts (defined below) .

5. Representations and Warranties of Assignee and Licensors.

(a) Due Authorization. Assignee is organized, existing and in good standing under the laws of the State of Colorado, and all actions necessary on the part of Assignee have been taken to authorize the entry into of this IP Assignment and License and the consummation of the transactions undertaken hereby.

(b) Contracts. Schedule 3 contains a complete and accurate list of all material contracts to which Assignee/Licensors is a party relating to the IP Assets (individually a "**Contract**" and collectively the "**Contracts**") which contain restrictions on the rights being granted to Licensee under the IP Residual License. Except with regard to those matters that have been publicly disclosed by Assignee/Licensors, there are no outstanding or, to Assignor's knowledge, threatened material disputes or disagreements with respect to any of the Contracts.

6. No Third Party Beneficiaries. This IP Assignment and License is for the benefit of the parties hereto, their successors and permitted assigns, and no third party shall claim any benefit under this agreement.

7. Further Actions. The parties agree to take all such further actions (including the execution of documents) as may be necessary or desirable to fulfil the purpose of this IP Assignment and License.

8. Counterparts. This IP Assignment and License may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed to be one and the same agreement. A signed copy of this IP Assignment and License delivered by facsimile, email or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this IP Assignment and License.

9. Governing Law. This IP Assignment and License shall be governed by the laws of the State of Colorado.

[Signatures follow on the next page.]

IN WITNESS WHEREOF, Assignor and Licensee and Assignee and Licensor have duly executed and delivered this IP Assignment and License to be effective as of the date first above written.

ASSIGNOR & LICENSEE

ADA ENVIRONMENTAL
SOLUTIONS LLC.

By: ADA-ES, Inc., as sole manager

By: /s/ Mark H. McKinnies

Mark H. McKinnies, Senior Vice
President and CFO

Address: 8100 Southpark Way, Unit B
Littleton, CO 80120

ASSIGNEE & LICENSOR:

ADA-ES, INC.

By: /s/ Michael D. Durham

Michael D. Durham, CEO

Address: 8100 Southpark Way, Unit B
Littleton, CO 80120

IN WITNESS WHEREOF, Assignor and Licensee and Assignee and Licensor have duly executed and delivered this IP Assignment and License to be effective as of the date first above written.

ASSIGNOR & LICENSEE

ADA ENVIRONMENTAL
SOLUTIONS LLC.

By: ADA-ES, Inc. as sole manager

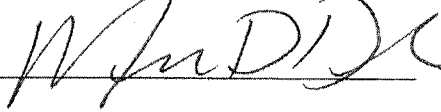
By: 

Mark H. McKinnies, Senior Vice
President and CFO

Address: 8100 Southpark Way, Unit B
Littleton, CO 80120

ASSIGNEE & LICENSOR:

ADA-ES, INC.

By: 

Name: _____

Michael D. Durham, CEO

Address: 8100 Southpark Way, Unit B
Littleton, CO 80120

SCHEDULES

Schedule 1 – Patents

Schedule 2 – Trademarks (None currently registered – see document attached showing historic common law trademark usage since 1998)

Schedule 3 – Material Licensor/Assignee Contracts

PATENTS

Pending Applications

Application No.	Filing Date	Status	Title
10/622,677	7/18/2003	Pending	Low Sulfur Coal Additive for Improved Furnace Operation
12/785,184	5/21/2010	Pending	Additives For Mercury Oxidation in Coal-Fired Power Plants
11/553,849	10/27/2006	Pending	Additives for Mercury Oxidation in Coal-Fired Power Plants
13/021,427	2/4/2011	Pending	Method and Equipment for Controlling Mercury Emissions from Coal-Fired Thermal Processes
13/045,076	3/10/2011	Pending	Process for Dilute Phase Injection of Dry Alkaline Materials
61/406,492	10/25/2010	Pending	Method and Equipment for Controlling Mercury Emissions from Coal-Fired Thermal Processes
61/415,480	11/19/2010	Pending	Process for Dilute Phase Injection of Dry Alkaline Materials
61/422,026	12/10/2010	Pending	Method and Equipment for Controlling Mercury Emissions from Coal-Fired Thermal Processes
61/439,676	2/4/2011	Pending	Remote Additive Application
61/466,773	3/23/2011	Pending	Method and Equipment for Controlling Mercury Emissions from Coal-Fired Thermal Processes
61/486,217	5/13/2011	Pending	Process to reduce emissions of nitrogen oxides and mercury from coal-fired boilers through the addition of amide and/or amine compound(s) plus a halogen compound(s) to coal
61/474,103	4/11/2011	Pending	Staged Fluidized Beds for CO2 Capture
61/474,108	4/11/2011	Pending	Counter-Current Contactor for CO2 Capture
PCT/US11/23758	2/4/2011	Pending	Method and Equipment for Controlling Mercury Emissions from Coal-Fired Thermal Processes

PATENT

REEL: 045333 FRAME: 0716

SCHEDULE I

PATENTS

PCT/US11/27968	3/10/2011	Pending	Process for Dilute Phase Injection of Dry Alkaline Materials
13/198,381	08/04/2011	Pending	Additives For Mercury Oxidation in Coal-Fired Power Plants
61/543,196	10/04/2011	Pending	Process to reduce emissions of nitrogen oxides and mercury from coal-fired boilers
61/542,979	10/04/2011	Pending	Methodology of air treatment for reliable injection of highly reactive dry alkaline materials

Issued Patents

Patent No.	Filing Date	Issue Date	Title
5,893,943	7/26/1993	4/13/1999	Method and Apparatus for Decreased Particle Emissions in Gas Streams
5,833,736	8/6/1997	11/10/1998	Method and Apparatus for Removing Undesired Particles from Gas Streams
5,855,649	8/4/1997	1/5/1999	Liquid Additives for Particulate Emissions Control
6,267,802	6/17/1999	7/31/2001	Composition and Method for Flue Gas Conditioning
6,729,248	6/26/2001	5/4/2004	Low Sulfur Coal Additive for Improved Furnace Operation
6,773,471	7/30/2002	8/10/2004	Low Sulfur Coal Additive for Improved Furnace Operation
7,332,002	7/30/2002	2/19/2008	Low Sulfur Coal Additive for Improved Furnace Operation
6,221,001	1/26/1999	4/24/2001	Fly-Ash Slurry with Solidification Retardant
6,797,035	9/16/2002	9/28/2004	Oxidizing Additives for Control of particulate Emissions
7,361,209	4/2/2004	4/22/2008	Apparatus and Process for Preparing Sorbents for Mercury Control at the Point of Use
7,731,780	8/8/2007	6/8/2010	Apparatus and Process for Preparing Sorbents for Mercury Control at the Point of Use
8,034,163	10/15/2008	10/11/2011	Apparatus and Process for Preparing Sorbents for Mercury Control at the Point of Use

PATENT

REEL: 045333 FRAME: 0717

Proprietary and Confidential Information - TRADESECRET

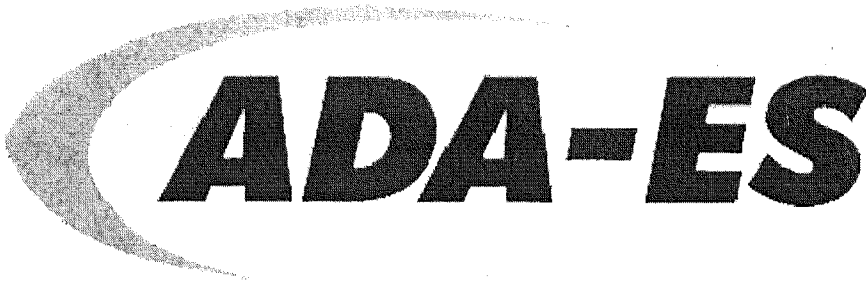
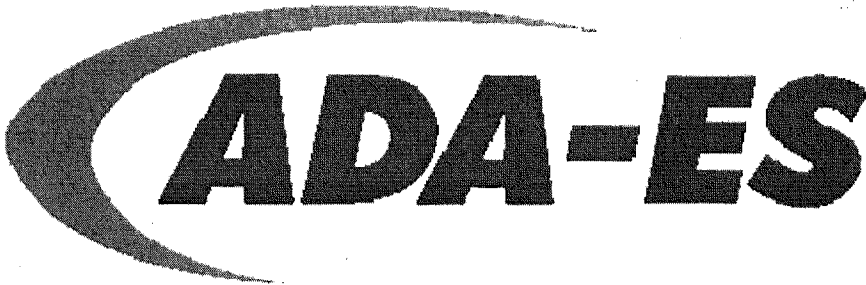
SCHEDULE 2

TRADEMARKS

LOGO FROM (APPROX) 1998 - 2003



LOGO 2004-2008

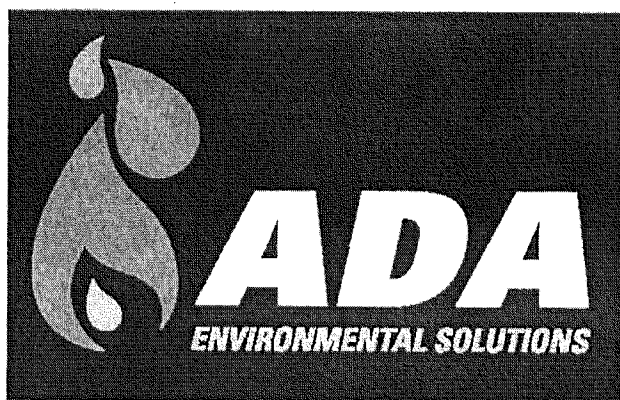


Note: a federal trademark registration application for "ADA Environmental Solutions" was abandoned in 2003 although the mark and logos (in some form) have been in continuous use.

SCHEDULE 2

TRADEMARKS

Logo 2008-2010



SCHEDULE 2

TRADEMARKS

Logo 2011



(ADA Environmental Solutions is written in white)

SCHEDULE 3

MATERIAL LICENSOR/ASSIGNEE CONTRACTS

- Intellectual Property License Agreement between ADA-ES, Inc. and ADA-Carbon Solutions, LLC (f/k/a Crowfoot Development, LLC) dated October 1, 2008.
- Amended and Restated License Agreement between ADA-ES, Inc. and Clean Coal Solutions, LLC dated October 30, 2009.
- Development and License Agreement between ADA-ES, Inc. and Arch Coal, Inc. dated June 25, 2010.
- Technology Sublicense Agreement between ADA-ES, Inc., Clean Coal Solutions, LLC and GS RC Investments LLC dated June 29, 2010.
- First Amendment to the Amended and Restated License Agreement between ADA-ES, Inc. and Clean Coal Solutions, LLC dated as of August 4, 2010.