PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5686700

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
DAVID T. DOUGHTY	01/29/2016
GINA L. MCNAMARA	01/28/2016

RECEIVING PARTY DATA

Name:	CALGON CARBON CORPORATION	
Street Address:	treet Address: 3000 GSK DRIVE	
City:	MOON TOWNSHIP	
State/Country: PENNSYLVANIA		
Postal Code: 15108		

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16356640

CORRESPONDENCE DATA

Fax Number:

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.

Email: docketingpgh@pepperlaw.com
Correspondent Name: PEPPER HAMILTON LLP

Address Line 1: 501 GRANT STREET, SUITE 300

Address Line 2: UNION TRUST BUILDING

Address Line 4: PITTSBURGH, PENNSYLVANIA 15219-4429

ATTORNEY DOCKET NUMBER:	123450.11111	
NAME OF SUBMITTER:	ANTONELLE M. PICCIRILLI	
SIGNATURE:	/Antonelle M. Piccirilli/	
DATE SIGNED:	08/26/2019	

Total Attachments: 8

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PATENT REEL: 050168 FRAME: 0756

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> PATENT REEL: 050168 FRAME: 0757

Attorney Docket No.: 123450.11101/11102

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PATENT

ASSIGNMENT

WHEREAS, I, David T. DOUGHTY (hereinafter "Assignor"), am an inventor of a certain new and useful invention(s) as set forth and disclosed in the patent application(s) listed in **Schedule A** attached hereto (hereinafter the "Invention"):

WHEREAS, Calgon Carbon Corporation, having an address of 3000 GSK Drive, Moon Township, PA 15108 (hereinafter "Assignee"), is desirous of acquiring Assignor's entire right, title and interest in and to said Invention and in and to any and all Letters Patent of the United States and foreign countries that may be obtained therefor.

WHEREAS, Assignor conveyed to Assignee all of Assignor's right, title, and interest in the Invention pursuant to Assignor's obligations under the Assignment executed on November 21, 2014.

NOW, THEREFORE, for good and valuable consideration, the receipt for and sufficiency of which is hereby acknowledged, at least as of November 21, 2014. Assignor does hereby confirm Assignor's previous assignment and does hereby sell, assign, transfer and set over unto Assignee, its legal representatives, successors, and assigns, Assignor's entire right, title and interest in and to said Invention as set forth in the scheduled application(s), including any applications which claim priority to the scheduled application(s), any application(s) to which the scheduled application(s) claim priority, and any continuations, continuations-in-part, divisions, registrations, reissues, re-examinations or extensions thereof, whether in the U.S. or any foreign country, and in and to any and all patents of the United States and foreign countries which may be issued for said Invention;

AND for good and valuable consideration, the receipt for and sufficiency of which is hereby acknowledged, Assignor does hereby sell, assign, transfer and set over unto Assignee, its legal representatives, successors, and assigns all rights to claim priority rights deriving from the Invention and scheduled application(s); all causes of action and remedies related to the Invention and scheduled application(s) (including, without limitation, the right to sue for past, present, or future infringement, misappropriate or violation of rights related to any of the foregoing and the right to collect royalties and other payments under or on account of any of the foregoing); and any and all other rights and interests arising out of, in connection with, or in relation to the Invention and scheduled application(s).

UPON SAID CONSIDERATION, Assignor shall not execute any writing or do any act whatsoever conflicting with the terms and conditions of this Assignment, and that Assignor will, at any time upon request, without further or additional consideration, but at the expense of said Assignee, execute such additional assignments and other writings and do such additional acts as said Assignee may deem necessary or desirable to perfect Assignee's enjoyment of this grant, and render all necessary assistance in making application for or obtaining original patents or applications, continuations, continuations-in-part, divisions, registrations, reissues, re-examinations or extensions thereof, whether in the U.S. or any foreign country, for said Invention, and in enforcing any rights or choses in action accruing as a result of such applications or patents, by giving testimony in any and all proceedings or transactions involving such applications or patents, and by executing preliminary statements and other

affidavits, it being understood that the foregoing covenant and agreement shall bind and inure to the benefit of the assigns and legal representatives of Assignor and Assignee.

The undersigned hereby grant(s) the firm of PEPPER HAMILTON LLP the power to insert on this Assignment any further identification, including the country, application number, filing date and/or title, which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office or other patent office for recordation of this document; and

The undersigned requests that any patents that may be issued for said Invention be issued to said Assignee, its legal representatives, successors or assigns, as an owner of my entire right, title and interest in and to said patent and the Invention covered thereby.

Date: 1/29/16	< Assignor	David T. DOUGHTY
d.	ACKNOWLEDG	<u>MENT</u>
STATE OF <u>PENUSYLVANIA</u> COUNTY OF <u>AUGULY</u>) Si	S:
satisfactorily proven) to be the personal	ly appeared Davison named in and	, 2016, before me, a Notary Public, vid T. DOUGHTY, to me known (or who executed the above instrument, and the uses and purposes therein set forth.
SEAL	Notary Public My commission	Gululy expires 4/20/19
		COMMONWEALTH OF PENNSYLVANIA

NOTARIAL SEAL Cynthia Cerchie Ligo, Notary Public

Moon Twp., Allegheny County My Commission Expires April 20, 2019

MEMBER, PENNSYLVANIA ASSOCIATION OF NOTABLES

Attorney Docket No.: 123450.11101/11102	2 P.	ATENI
Agreed and accepted:	Calgon Carbon Corporation	>
Date: <u>)anvang 29, 2016</u>	Assignee: Charles Uhalen Title: Sunjor Vice President, General Suretany	ı Covn
ACKNO	OWLEDGMENT	
STATE OF PENNSYLVANIA)) SS:	
STATE OF PENNSYLVANIA COUNTY OF ANGHEM) 55:	
satisfactorily proven) to be the person nam	2016, before me, a Notary ed <u>Chad Whalen</u> , to me knowned in and who executed the above instrument as a same for the uses and purposes therein set for	own (or ent, and
S E A L Notary	y Public Scinca Race (50)	4

NOTARIAL SEAL
Jessica Rachel Duffy, Notary Public
Moon Twp., Allegheny County
My Commission Expires Aug. 11, 2019
WEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

COMMONWEALTH OF PENNSYLVANIA

Notary Public My commission expires Qu

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SCHEDULE A

Country	Patent Application No.	Filing Date	Title
US	62/101,622	January 9, 2015	CARBON SORBENTS FOR THE REMOVAL OF NITROGEN OXIDES AND METHODS FOR MAKING THE SAME
US	14/992,554	January 11, 2016	CARBON SORBENTS FOR THE REMOVAL OF NITROGEN OXIDES AND METHODS FOR MAKING THE SAME
WO	PCT/US2016/012852	January 11, 2016	CARBON SORBENTS FOR THE REMOVAL OF NITROGEN OXIDES AND METHODS FOR MAKING THE SAME
		:	

ASSIGNMENT

WHEREAS, I, Gina L. MCNAMARA (hereinafter "Assignor"), am an inventor of a certain new and useful invention(s) as set forth and disclosed in the patent application(s) listed in <u>Schedule A</u> attached hereto (hereinafter the "Invention"):

WHEREAS, Calgon Carbon Corporation, having an address of 3000 GSK Drive, Moon Township, PA 15108 (hereinafter "Assignee"), is desirous of acquiring Assignor's entire right, title and interest in and to said Invention and in and to any and all Letters Patent of the United States and foreign countries that may be obtained therefor.

WHEREAS, Assignor conveyed to Assignee all of Assignor's right, title, and interest in the Invention pursuant to Assignor's obligations under the Assignment executed on November 21, 2014.

NOW, THEREFORE, for good and valuable consideration, the receipt for and sufficiency of which is hereby acknowledged, at least as of November 21, 2014. Assignor does hereby confirm Assignor's previous assignment and does hereby sell, assign, transfer and set over unto Assignee, its legal representatives, successors, and assigns, Assignor's entire right, title and interest in and to said Invention as set forth in the scheduled application(s), including any applications which claim priority to the scheduled application(s), any application(s) to which the scheduled application(s) claim priority, and any continuations, continuations-in-part, divisions, registrations, reissues, re-examinations or extensions thereof, whether in the U.S. or any foreign country, and in and to any and all patents of the United States and foreign countries which may be issued for said Invention;

AND for good and valuable consideration, the receipt for and sufficiency of which is hereby acknowledged, Assignor does hereby sell, assign, transfer and set over unto Assignee, its legal representatives, successors, and assigns all rights to claim priority rights deriving from the Invention and scheduled application(s); all causes of action and remedies related to the Invention and scheduled application(s) (including, without limitation, the right to sue for past, present, or future infringement, misappropriate or violation of rights related to any of the foregoing and the right to collect royalties and other payments under or on account of any of the foregoing); and any and all other rights and interests arising out of, in connection with, or in relation to the Invention and scheduled application(s).

UPON SAID CONSIDERATION, Assignor shall not execute any writing or do any act whatsoever conflicting with the terms and conditions of this Assignment, and that Assignor will, at any time upon request, without further or additional consideration, but at the expense of said Assignee, execute such additional assignments and other writings and do such additional acts as said Assignee may deem necessary or desirable to perfect Assignee's enjoyment of this grant, and render all necessary assistance in making application for or obtaining original patents or applications, continuations, continuations-in-part, divisions, registrations, reissues, re-examinations or extensions thereof, whether in the U.S. or any foreign country, for said Invention, and in enforcing any rights or choses in action accruing as a result of such applications or patents, by giving testimony in any and all proceedings or transactions involving such applications or patents, and by executing preliminary statements and other

affidavits, it being understood that the foregoing covenant and agreement shall bind and inure to the benefit of the assigns and legal representatives of Assignor and Assignee.

The undersigned hereby grant(s) the firm of PEPPER HAMILTON LLP the power to insert on this Assignment any further identification, including the country, application number, filing date and/or title, which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office or other patent office for recordation of this document; and

The undersigned requests that any patents that may be issued for said Invention be issued to said Assignee, its legal representatives, successors or assigns, as an owner of my entire right, title and interest in and to said patent and the Invention covered thereby.

Date: January 28, 2016

Assignor: 🖳

ACKNOWLEDGMENT

STATE OF <u>PENNSYLVANIA</u>)

COUNTY OF <u>AUFGHEM</u>)

SS:

On this 2010 day of 2010 appeared Gina L. MCNAMARA, to me known (or satisfactorily proven) to be the person named in and who executed the above instrument, and acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

SEAL

Notary Public

COMMONWEALTH OF PENNSYLVANI

NOTARIAL SEAL

Cynthia Cerchie Ligo, Notary Public

Moon Twp., Allegheny County My Commission Expires April 20, 2019

MEMBER, PENHSYLVANIA ASSOCIATION OF NOTARIES

COMMONWEALTH OF PENNSYLVANIA My commission expires (Lully !

Attorney Docket No.: 12	23450.11101/11102
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PATENT

Agreed and accepted:	Calgon Carbon Corporation	
Date: <u>January 29, 2016</u>	Assignee: Chad Whalen By: Chad Whalen Title: Senior VICC PICSIDENT, GENERAL COMSE SCURLANG	85 . A.
A	CKNOWLEDGMENT	
STATE OF PENNSYLVANIA COUNTY OF AUGUEM)) SS:)	
the undersigned officer, personally as satisfactorily proven) to be the perso	2016, before me, a Notary Public, peared <u>Chad Whalen</u> , to me known (or named in and who executed the above instrument, and ted the same for the uses and purposes therein set forth.	
	Jotary Public Lessiers Rankel Full	
COMMONWEALTH OF PENNSYLVANIA INCOMMONWEALTH OF PENNSYLVANIA INCOMMON INCOMI	Ty commission expires august 11, 2019	

Attorney Docket No.: 123450.11101/11102

SCHEDULE A

Country	Patent Application No.	Filing Date	Title
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US	14/992,554	January 11, 2016	CARBON SORBENTS FOR THE REMOVAL OF NITROGEN OXIDES AND METHODS FOR MAKING THE SAME
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