

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT7093249

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	SECURITY INTEREST
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
COVIA SOLUTIONS INC.	12/31/2020
COVIA HOLDINGS LLC	12/31/2020
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	PNC BANK, NATIONAL ASSOCIATION
<b>Street Address:</b>	COMMERCIAL LOAN SERVICE CENTER/DCC
<b>Internal Address:</b>	500 FIRST AVENUE
<b>City:</b>	PITTSBURGH
<b>State/Country:</b>	PENNSYLVANIA
<b>Postal Code:</b>	15219
<b>PROPERTY NUMBERS Total: 46</b>	
<b>Property Type</b>	<b>Number</b>
Patent Number:	9932521
Patent Number:	9644139
Patent Number:	9796916
Patent Number:	9845428
Patent Number:	9845429
Patent Number:	10472943
Patent Number:	10316244
Patent Number:	6372678
Patent Number:	10808162
Patent Number:	7757976
Patent Number:	7942351
Patent Number:	8070080
Patent Number:	9034096
Patent Number:	7915188
Patent Number:	8864900
Patent Number:	10065194
Patent Number:	8182601
Patent Number:	8795427

Property Type	Number
Patent Number:	9266115
Patent Number:	7498377
Patent Number:	7618488
Patent Number:	7618487
Patent Number:	8464969
Patent Number:	8858699
Patent Number:	10294377
Patent Number:	7582157
Patent Number:	7104403
Patent Number:	9085671
Patent Number:	10023790
Patent Number:	10023791
Patent Number:	10738193
Application Number:	15919399
Application Number:	17005751
Application Number:	16364334
Patent Number:	7049272
Patent Number:	7135231
Patent Number:	8852682
Patent Number:	7647964
Patent Number:	7763316
Patent Number:	7275643
Patent Number:	8754147
Patent Number:	8697185
Patent Number:	9845427
Patent Number:	9315721
Patent Number:	9297244
Patent Number:	9868896

#### **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.*

**Phone:** 17136328629

**Email:** kareem.ansley@blankrome.com

**Correspondent Name:** KAREEM ANSLEY

**Address Line 1:** BLANK ROME LLP

**Address Line 2:** 717 TEXAS AVENUE

**Address Line 4:** HOUSTON, TEXAS 77002

<b>NAME OF SUBMITTER:</b>	KAREEM ANSLEY
<b>SIGNATURE:</b>	/Kareem Ansley/
<b>DATE SIGNED:</b>	12/27/2021
<b>Total Attachments: 8</b> source=07. Patent Security Agreement#page1.tif source=07. Patent Security Agreement#page2.tif source=07. Patent Security Agreement#page3.tif source=07. Patent Security Agreement#page4.tif source=07. Patent Security Agreement#page5.tif source=07. Patent Security Agreement#page6.tif source=07. Patent Security Agreement#page7.tif source=07. Patent Security Agreement#page8.tif	

## PATENT SECURITY AGREEMENT

This **PATENT SECURITY AGREEMENT**, dated as of December 31, 2020 (as it may be amended, restated, supplemented or otherwise modified from time to time, this “Agreement”), is made by the entities identified as grantors on the signature pages hereto (collectively, the “Grantors”) in favor of PNC Bank, National Association, as agent (in such capacity, together with its successors and permitted assigns, the “Agent”) for the Secured Parties.

**WHEREAS**, the Grantors are party to the Revolving Credit and Security Agreement dated as of December 31, 2020 (as it may be amended, restated, supplemented or otherwise modified from time to time, the “Credit Agreement”) among the Grantors, the other Loan Parties party thereto, the lenders party thereto and Agent pursuant to which the Grantors granted a security interest to the Agent, for the benefit of the Secured Parties, in the Patent Collateral (as defined below) and are required to execute and deliver this Agreement.

**NOW, THEREFORE**, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Grantors hereby agree with the Agent as follows:

### SECTION. 1. Defined Terms

Unless otherwise defined herein, terms defined in the Credit Agreement and used herein have the meaning given to them in the Credit Agreement.

### SECTION 2. Grant of Security Interest

Each Grantor hereby grants to the Agent, for the benefit of the Secured Parties, a security interest in and continuing lien on all of such Grantor’s right, title and interest in, to and under the following, in each case whether now owned or existing or hereafter acquired, developed, created or arising and wherever located (collectively, the “Patent Collateral”): (i) each patent and patent application of the Grantor, including those listed in Schedule A attached hereto, (ii) all reissues, divisions, continuations, continuations-in-part, extensions, renewals, and reexaminations thereof, (iii) all improvements thereto, (iv) the right to sue or otherwise recover for any past, present and future infringement or other violation thereof, (v) all Proceeds of the foregoing, including, without limitation, license fees, royalties, income, payments, claims, damages, and proceeds of suit now or hereafter due and/or payable with respect thereto, and (vi) all other rights of any kind accruing thereunder or pertaining thereto throughout the world.

### SECTION 3. Security Agreement

The security interest granted pursuant to this Agreement is granted in conjunction with the security interest granted to the Agent for the Secured Parties pursuant to the Credit Agreement, and the Grantors hereby acknowledge and affirm that the rights and remedies of the Agent with respect to the security interest in the Patent Collateral made and granted hereby are more fully set forth in the Credit Agreement, the terms and provisions of which are incorporated by reference herein as if fully set forth herein. In the event that any provision of this Agreement is deemed to conflict with the Credit Agreement, the provisions of the Credit Agreement shall control.

#### **SECTION 4. Governing Law**

THIS AGREEMENT AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES HEREUNDER AND ALL CLAIMS AND CONTROVERSIES ARISING OUT OF THE SUBJECT MATTER HEREOF WHETHER SOUNDING IN CONTRACT LAW, TORT LAW OR OTHERWISE SHALL BE GOVERNED BY, AND SHALL BE CONSTRUED AND ENFORCED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO CONFLICTS OF LAW PROVISIONS THAT WOULD RESULT IN THE APPLICATION OF ANY OTHER LAW (OTHER THAN ANY MANDATORY PROVISIONS OF LAW RELATING TO THE LAW GOVERNING PERFECTION AND THE EFFECT OF PERFECTION OF THE SECURITY INTEREST GRANTED HEREBY).

#### **SECTION 5. Counterparts**

This Agreement may be executed in one or more counterparts and by different parties hereto in separate counterparts, each of which when so executed and delivered shall be deemed an original, but all such counterparts together shall constitute but one and the same instrument.

[Remainder of page intentionally left blank]

**IN WITNESS WHEREOF**, each Grantor has caused this Agreement to be executed and delivered by its duly authorized officer as of the date first set forth above.

**COVIA SOLUTIONS INC.**

By: Andrew Eich  
Name: Andrew D. Eich  
Title: Executive Vice President and Chief  
Financial Officer

**COVIA HOLDINGS LLC**

By: Andrew Eich  
Name: Andrew D. Eich  
Title: Executive Vice President, Chief Financial  
Officer and Treasurer

Accepted and Agreed:

**PNC BANK, NATIONAL ASSOCIATION,**  
as Agent

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

Name: Timothy Swiss

Title: Senior Vice President

[Signature Page to Patent Security Agreement]

**PATENT**  
**REEL: 058581 FRAME: 0523**

**SCHEDULE A**

**to**

**PATENT SECURITY AGREEMENT**

**PATENTS AND PATENT APPLICATIONS**

Country	Title	Status	App. No.	Filing Date	Patent No.	Grant Date	Record Owner <sup>1</sup>	Grantor
US	Downhole Chemical Delivery System For Oil And Gas Wells	Granted	10/195989	7/16/2002	7049272	5/23/2006	TechniSand Inc.	Covia Solutions Inc.
US	Process For Incremental Coating Of Proppants For Hydraulic Fracturing And Proppants Produced Therefrom	Granted	10/611200	7/1/2003	7135231	11/14/2006	Fairmount Santrol Inc.	Covia Solutions Inc.
US	Process For Incremental Coating Of Proppants For Hydraulic Fracturing And Proppants Produced Therefrom	Granted	11/582644	10/18/2006	8852682	10/7/2014	Fairmount Santrol Inc.	Covia Solutions Inc.
US	Degradable Ball Sealers And Methods For Use In Well Treatment	Granted	11/640813	12/18/2006	7647964	1/19/2010	Fairmount Santrol Inc.	Covia Solutions Inc.
US	No Hexa Shell Sand	Granted	11/645991	12/27/2006	7763316	7/27/2010	Fairmount Santrol Inc.	Covia Solutions Inc.
US	Environmentally Safe Promoter For Use In Flotation Separation Of Carbonates From Minerals	Granted	11/203919	8/15/2005	7275643	10/2/2007	Fairmount Santrol Inc.	Covia Solutions Inc.
US	No Hexa Shell Sand	Granted	12/832171	7/8/2010	8754147	6/17/2014	Fairmount Santrol Inc.	Covia Solutions Inc.
US	Rapid Action Coater And Process For Coating Ceramic Particles Using Same	Granted	12/914560	10/28/2010	8697185	4/15/2014	Fairmount Santrol Inc.	Covia Solutions Inc.
US	Proppants For Hydraulic Fracturing Technologies	Granted	12/908411	10/20/2010	9845427	12/19/2017	Self-Suspending Proppant LLC	Covia Solutions Inc.
US	Self-Suspending Proppants For Hydraulic Fracturing	Granted	13/599828	8/30/2012	9315721	4/19/2016	Self-Suspending Proppant LLC	Covia Solutions Inc.
US	Self-Suspending Proppants For Hydraulic Fracturing Comprising A Coating Of Hydrogel-Forming Polymer	Granted	13/838806	3/15/2013	9297244	3/29/2016	Self-Suspending Proppant LLC	Covia Solutions Inc.
US	Self-Suspending Proppants For Hydraulic Fracturing	Granted	14/197596	3/5/2014	9868896	1/16/2018	Self-Suspending Proppant LLC	Covia Solutions Inc.

<sup>1</sup> Title update to be made with US PTO to reflect grantor as owner.



Country	Title	Status	App. No.	Filing Date	Patent No.	Grant Date	Record Owner <sup>1</sup>	Grantor
US	Calcium Ion Tolerant Self-Suspending Proppants	Granted	14/631946	2/26/2015	9932521	4/3/2018	Self-Suspending Proppant LLC	Covia Solutions Inc.
US	Self-Suspending Proppants For Hydraulic Fracturing	Granted	14/958112	12/3/2015	9644139	5/9/2017	Self-Suspending Proppant LLC	Covia Solutions Inc.
US	Self-Suspending Proppants For Hydraulic Fracturing	Granted	15/081037	3/25/2016	9796916	10/24/2017	Self-Suspending Proppant LLC	Covia Solutions Inc.
US	Proppants For Hydraulic Fracturing Technologies	Granted	15/339986	11/1/2016	9845428	12/19/2017	Self-Suspending Proppant LLC	Covia Solutions Inc.
US	Self-Suspending Proppants For Hydraulic Fracturing	Granted	15/340000	11/1/2016	9845429	12/19/2017	Self-Suspending Proppant LLC	Covia Solutions Inc.
US	Self-Suspending Proppants For Hydraulic Fracturing	Granted	15/721983	10/2/2017	10472943	11/12/2019	Self-Suspending Proppant LLC	Covia Solutions Inc.
US	Self-Suspending Proppants For Hydraulic Fracturing	Granted	15/834255	12/7/2017	10316244	6/11/2019	Self-Suspending Proppant LLC	Covia Solutions Inc.
US	Proppant Composition For Gas And Oil Well Fracturing	Granted	09/955281	9/18/2001	6372678	4/16/2002	Fairmount Santrol Inc.	Covia Solutions Inc.
US	Flowback Resistant Proppants	Published	15/919399	3/13/2018			Fairmount Santrol Inc.	Covia Solutions Inc.
US	Crush Resistant Buoyant Ball Sealers	Granted	16/171414	10/26/2018	10808162	10/20/2020	Fairmount Santrol Inc.	Covia Solutions Inc.

Country	Title	Status	Appl. No.	Filing Date	Patent No.	Grant Date	Record Owner <sup>2</sup>	Grantor
US		Pending (Unpublished)	17/005751	8/28/2020			Covia Holdings Corporation	Covia Holdings LLC
US	Method Of Processing Nepheline Syenite Powder To Produce An Ultra-Fine Grain Size Product	Granted	12/009693	1/22/2008	7757976	7/20/2010	Covia Holdings Corporation	Covia Holdings LLC
US	Method Of Processing Nepheline Syenite Powder To Produce An Ultra-Fine Grain Size Product	Granted	12/823313	6/25/2010	7942351	5/17/2011	Covia Holdings Corporation	Covia Holdings LLC
US	Method Of Processing Nepheline Syenite Powder To Produce An Ultra-Fine Grain Size Product	Granted	12/985071	1/5/2011	8070080	12/6/2011	Covia Holdings Corporation	Covia Holdings LLC
US	Nepheline Syenite Powder With Controlled Particle Size And Novel Method Of Making Same	Granted	12/215643	6/27/2008	9034096	5/19/2015	Covia Holdings Corporation	Covia Holdings LLC
US	Ultrafine Nepheline Syenite	Granted	12/080655	4/4/2008	7915188	3/29/2011	Covia Holdings Corporation	Covia Holdings LLC
US	Ultrafine Nepheline Syenite	Granted	12/948386	11/17/2010	8864900	10/21/2014	Covia Holdings Corporation	Covia Holdings LLC

<sup>2</sup> Title update to be made with US PTO to reflect grantor as owner.

Country	Title	Status	Appl. No.	Filing Date	Patent No.	Grant Date	Record Owner <sup>2</sup>	Grantor
US	Ultrafine Nepheline Syenite	Granted	15/136371	4/22/2016	10065194	9/4/2018	Covia Holdings Corporation	Covia Holdings LLC
US	Powder Formed From Mineral Or Rock Material With Controlled Particle Size Distribution For Thermal Films	Granted	12/237628	9/25/2008	8182601	5/22/2012	Covia Holdings Corporation	Covia Holdings LLC
US	Powder Formed From Mineral Or Rock Material With Controlled Particle Size Distribution For Thermal Films	Granted	13/420757	3/15/2012	8795427	8/5/2014	Covia Holdings Corporation	Covia Holdings LLC
US	Powder Formed From Mineral Or Rock Material With Controlled Particle Size Distribution For Thermal Films	Granted	14/313397	6/24/2014	9266115	2/23/2016	Covia Holdings Corporation	Covia Holdings LLC
US	Fluoride Based Composite Material And Method For Making The Same	Granted/ Closed <sup>3</sup>	11/523058	9/15/2006	7498377	3/3/2009	Covia Holdings Corporation	Covia Holdings LLC
US	Fluorspar-Based Filler And Method For Making The Same	Granted/ Closed <sup>4</sup>	12/125956	5/23/2008	7618488	11/17/2009	Covia Holdings Corporation	Covia Holdings LLC
US	Fluorspar-Based Filler And Method For Making The Same	Granted/ Closed <sup>5</sup>	12/125594	5/22/2008	7618487	11/17/2009	Covia Holdings Corporation	Covia Holdings LLC
US	Method Of Making Proppants Used In Gas Or Oil Extraction	Issued	13/197520	8/3/2011	8464969	6/18/2013	Covia Holdings Corporation	Covia Holdings LLC
US	Ultra Fine Nepheline Syenite Powder And Products For Using Same	Granted	11/803093	5/11/2007	8858699	10/14/2014	Covia Holdings Corporation	Covia Holdings LLC
US	Ultra Fine Nepheline Syenite Powder And Products For Using Same	Granted	15/943645	4/2/2018	10294377	5/21/2019	Covia Holdings Corporation	Covia Holdings LLC
US	Ultra Fine Nepheline Syenite Powder And Products For Using Same	Published	16364334	3/26/2019	*	*	Covia Holdings Corporation	Covia Holdings LLC
US	Pigment Composition For Paint	Granted	11/256839	10/24/2005	7582157	9/1/2009	Covia Holdings Corporation	Covia Holdings LLC
US	Static Two Stage Air Classifier	Granted	10/230323	8/29/2002	7104403	9/12/2006	Covia Holdings Corporation	Covia Holdings LLC
US	Mineral Based Fillers Used As A Substitute For Wood Fillers In Simulated Wood Products And Simulated Wood Products Containing The Same	Granted	13/846474	3/18/2013	9085671	7/21/2015	Covia Holdings Corporation	Covia Holdings LLC

<sup>3</sup> Will lapse in due course and not be maintained.

<sup>4</sup> Will lapse in due course and not be maintained.

<sup>5</sup> Will lapse in due course and not be maintained.

Country	Title	Status	Appl. No.	Filing Date	Patent No.	Grant Date	Record Owner <sup>2</sup>	Grantor
US	Dust Free Proppant And Method Of Making Same	Granted	15/091034	4/5/2016	10023790	7/17/2018	Covia Holdings Corporation	Covia Holdings LLC
US	System And Method Of Coating A Proppant	Granted	15232912	8/10/2016	10023791	7/17/2018	Covia Holdings Corporation	Covia Holdings LLC
US	Dust Free Silica Particles	Granted	15907335	2/28/2018	10738193	8/11/2020	Covia Holdings Corporation	Covia Holdings LLC