

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT4860465

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	FIRST LIEN INTELLECTUAL PROPERTY SECURITY AGREEMENT
<b>SEQUENCE:</b>	1

## CONVEYING PARTY DATA

Name	Execution Date
EAGLEPICHER TECHNOLOGIES, LLC	03/08/2018

## RECEIVING PARTY DATA

<b>Name:</b>	JEFFERIES FINANCE LLC
<b>Street Address:</b>	520 Madison Avenue
<b>City:</b>	NEW YORK
<b>State/Country:</b>	NEW YORK
<b>Postal Code:</b>	10022

## PROPERTY NUMBERS Total: 63

Property Type	Number
Patent Number:	9455703
Patent Number:	9548497
Patent Number:	9306223
Patent Number:	8374311
Patent Number:	9244132
Patent Number:	8669007
Patent Number:	8663825
Patent Number:	8638061
Patent Number:	RE46156
Patent Number:	8652674
Patent Number:	8394520
Patent Number:	8440342
Patent Number:	8623553
Patent Number:	8997875
Patent Number:	8925461
Patent Number:	9184451
Patent Number:	9190642
Patent Number:	9023518
Patent Number:	9531199

PATENT

<b>Property Type</b>	<b>Number</b>
Patent Number:	7190147
Patent Number:	7826197
Patent Number:	8252461
Patent Number:	7176806
Patent Number:	7482941
Patent Number:	7868777
Patent Number:	8044814
Patent Number:	8052764
Patent Number:	7875088
Patent Number:	8001677
Patent Number:	8603658
Patent Number:	7545147
Patent Number:	8570046
Patent Number:	7928691
Patent Number:	7821230
Patent Number:	7871447
Patent Number:	7926169
Patent Number:	6475662
Patent Number:	7825629
Patent Number:	6193871
Patent Number:	6376944
Patent Number:	6016048
Patent Number:	6518726
Patent Number:	8048557
Patent Number:	6207318
Patent Number:	9455447
Patent Number:	6756766
Patent Number:	7504177
Patent Number:	6852446
Patent Number:	8003242
Patent Number:	9647276
Patent Number:	9735434
Patent Number:	8427098
Patent Number:	9882243
Patent Number:	9893383
Application Number:	14958298
Application Number:	14054454
Application Number:	13839824

Property Type	Number
Application Number:	13748033
Application Number:	13790346
Application Number:	14730590
Application Number:	14887992
Application Number:	15289099
Application Number:	62472522

**CORRESPONDENCE DATA**

**Fax Number:** (800)494-7512  
*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:** 800-494-5225  
**Email:** ipteam@cogencyglobal.com  
**Correspondent Name:** STEWART WALSH  
**Address Line 1:** 1025 VERMONT AVE NW, SUITE 1130  
**Address Line 2:** COGENCY GLOBAL INC.  
**Address Line 4:** WASHINGTON, D.C. 20005

<b>ATTORNEY DOCKET NUMBER:</b>	F175929 PAT 1L
<b>NAME OF SUBMITTER:</b>	EMILY OHANNESSIAN
<b>SIGNATURE:</b>	/EMILY OHANNESSIAN/
<b>DATE SIGNED:</b>	03/09/2018

**Total Attachments: 14**  
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## FIRST LIEN INTELLECTUAL PROPERTY SECURITY AGREEMENT

This **FIRST LIEN INTELLECTUAL PROPERTY SECURITY AGREEMENT** (as amended, amended and restated, supplemented or otherwise modified from time to time, the “IP Security Agreement”) dated March 8, 2018, is among the Persons listed on the signature pages hereof (collectively, the “Grantors”) and JEFFERIES FINANCE LLC, as collateral agent (in such capacity, the “Collateral Agent”) for the Secured Parties (as defined in the Credit Agreement referred to below).

WHEREAS, EPV MERGER SUB, INC., a Delaware corporation (“MergerSub”), immediately upon consummation of the Merger (as defined in the Credit Agreement (as defined below)), VECTRA CO., a Delaware corporation (“Vectra” and together with MergerSub, the “Borrower”), and EPV BUYER, INC., a Delaware corporation (“Holdings”), have entered into the First Lien Credit Agreement dated as of March 8, 2018 (as amended, amended and restated, supplemented or otherwise modified from time to time, the “Credit Agreement”), with the lenders and financial institutions from time to time party thereto and JEFFERIES FINANCE LLC, as Administrative Agent, Collateral Agent and an L/C Issuer. Capitalized terms defined in the Credit Agreement or in the Security Agreement (as defined below) and not otherwise defined herein are used herein as defined in the Credit Agreement or the Security Agreement, as the case may be (and in the event of a conflict, the applicable definition shall be the one given to such term in the Security Agreement).

WHEREAS, as a condition precedent to the making of the Loans by the Lenders from time to time and the issuance of Letters of Credit by the L/C Issuers from time to time, the entry into Secured Hedge Agreements by the Hedge Banks from time to time and the entry into Secured Cash Management Agreements by the Cash Management Banks from time to time, each Grantor has executed and delivered that certain First Lien Security Agreement dated as of March 8, 2018 (as amended, amended and restated, supplemented or otherwise modified from time to time, the “Security Agreement”), among the Grantors from time to time party thereto and the Collateral Agent.

WHEREAS, under the terms of the Security Agreement, the Grantors have granted to the Collateral Agent, for the benefit of the Secured Parties, a security interest in, among other property, certain intellectual property of the Grantors, and have agreed thereunder to execute this IP Security Agreement for recording with the USPTO and/or the USCO, as applicable.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each Grantor agrees as follows:

Section 1. Grant of Security. Each Grantor hereby collaterally assigns and pledges to the Collateral Agent (and its successors and permitted assigns), for the benefit of the Secured Parties, and each Grantor hereby grants to the Collateral Agent (and its successors and permitted assigns), for the benefit of the Secured Parties, a security interest in and to all of such Grantor’s right, title and interest in and to the following, whether now owned or hereafter acquired by the undersigned (the “Collateral”):

(i) all Patents, including the patents and patent applications set forth in Schedule A hereto (the “Patent Collateral”);

(ii) all Trademarks, including the trademark and service mark registrations and applications set forth in Schedule B hereto (provided that no security interest shall be granted in United States intent-to-use trademark applications prior to the filing of a “Statement of Use” pursuant to Section 1(d) of the Lanham Act or an “Amendment to Allege Use” pursuant to Section 1(c) of the Lanham Act with respect thereto, to the extent that, and solely during the period, if any, in which, the grant of a security interest

therein or the assignment thereof would impair the validity or enforceability of any registration that issues from such intent-to-use application under applicable federal law), together with the goodwill symbolized thereby (the “Trademark Collateral”);

(iii) all Copyrights, whether registered or unregistered, including, without limitation, the copyright registrations and applications set forth in Schedule C hereto (the “Copyright Collateral”);

(iv) all reissues, divisions, continuations, continuations-in-part, extensions, renewals and reexaminations of any of the foregoing, all rights in the foregoing provided by international treaties or conventions, all rights corresponding thereto throughout the world and all other rights of any kind whatsoever of such Grantor accruing thereunder or pertaining thereto;

(v) any and all claims for damages and injunctive relief for past, present and future infringement, dilution, misappropriation, violation, misuse or breach with respect to any of the foregoing, with the right, but not the obligation, to sue for and collect, or otherwise recover, such damages; and

(vi) any and all proceeds of, collateral for, income, royalties and other payments now or hereafter due and payable with respect to, and supporting obligations relating to, any and all of the Collateral of or arising from any of the foregoing;

provided that notwithstanding anything to the contrary contained in the foregoing clauses (i) through (vi), the security interest created hereby shall not extend to, and the term “Collateral” shall not include, any Excluded Property.

Section 2. Security for Obligations. The grant of a security interest in the Collateral by each Grantor under this IP Security Agreement secures the payment of all Secured Obligations of such Grantor now or hereafter existing under or in respect of the Secured Documents (as such Secured Documents may be amended, amended and restated, supplemented, replaced, refinanced or otherwise modified from time to time (including any increases of the principal amount outstanding thereunder)), whether direct or indirect, absolute or contingent, and whether for principal, reimbursement obligations, interest, premiums, penalties, fees, indemnifications, contract causes of action, costs, expenses or otherwise. Without limiting the generality of the foregoing, this IP Security Agreement secures, as to each Grantor, the payment of all amounts that constitute part of the Secured Obligations that would be owed by such Grantor to any Secured Party under the Secured Documents but for the fact that they are unenforceable or not allowable due to the existence of a bankruptcy, or reorganization or similar proceeding involving a Loan Party.

Section 3. Recordation. Each Grantor authorizes and requests that the Register of Copyrights, the Commissioner for Patents and the Commissioner for Trademarks record this IP Security Agreement.

Section 4. Execution in Counterparts. This IP Security Agreement may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement.

Section 5. Grants, Rights and Remedies. This IP Security Agreement has been entered into in conjunction with the provisions of the Security Agreement. Each Grantor does hereby acknowledge and confirm that the grant of the security interest hereunder to, and the rights and remedies of, the Collateral Agent with respect to the Collateral are more fully set forth in the Security Agreement, the

terms and provisions of which are incorporated herein by reference as if fully set forth herein. In the event of any conflict between the terms of this IP Security Agreement and the terms of the Security Agreement, the terms of the Security Agreement shall govern.

Section 6. Governing Law; Jurisdiction; Etc.

(a) THIS IP SECURITY AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK WITHOUT GIVING EFFECT TO THE CONFLICTS OF LAWS PRINCIPLES THEREOF, BUT INCLUDING SECTION 5-1401 OF THE NEW YORK GENERAL OBLIGATIONS LAW.

(b) EACH PARTY HERETO IRREVOCABLY AND UNCONDITIONALLY SUBMITS, FOR ITSELF AND ITS PROPERTY, TO THE EXCLUSIVE JURISDICTION OF THE COURTS OF THE STATE OF NEW YORK SITTING IN NEW YORK CITY IN THE BOROUGH OF MANHATTAN AND OF THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF NEW YORK SITTING IN THE BOROUGH OF MANHATTAN, AND ANY APPELLATE COURT FROM ANY THEREOF, IN ANY ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS IP SECURITY AGREEMENT, OR FOR RECOGNITION OR ENFORCEMENT OF ANY JUDGMENT, AND EACH OF THE PARTIES HERETO IRREVOCABLY AND UNCONDITIONALLY AGREES THAT ALL CLAIMS IN RESPECT OF ANY SUCH ACTION OR PROCEEDING MAY BE HEARD AND DETERMINED IN SUCH NEW YORK STATE COURT OR, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, IN SUCH FEDERAL COURT. EACH OF THE PARTIES HERETO AGREES THAT A FINAL JUDGMENT IN ANY SUCH ACTION OR PROCEEDING SHALL BE CONCLUSIVE AND MAY BE ENFORCED IN OTHER JURISDICTIONS BY SUIT ON THE JUDGMENT OR IN ANY OTHER MANNER PROVIDED BY LAW. NOTHING IN THIS IP SECURITY AGREEMENT SHALL AFFECT ANY RIGHT THAT THE COLLATERAL AGENT, ANY LENDER OR ANY L/C ISSUER MAY OTHERWISE HAVE TO BRING ANY ACTION OR PROCEEDING RELATING TO THIS IP SECURITY AGREEMENT OR THE RECOGNITION OR ENFORCEMENT OF ANY JUDGMENT AGAINST ANY LOAN PARTY OR ITS PROPERTIES IN THE COURTS OF ANY JURISDICTION.

(c) EACH PARTY HERETO IRREVOCABLY AND UNCONDITIONALLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY OBJECTION THAT IT MAY NOW OR HEREAFTER HAVE TO THE LAYING OF VENUE OF ANY ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS IP SECURITY AGREEMENT IN ANY COURT REFERRED TO IN CLAUSE (b) OF THIS SECTION 6. EACH OF THE PARTIES HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, THE DEFENSE OF AN INCONVENIENT FORUM TO THE MAINTENANCE OF SUCH ACTION OR PROCEEDING IN ANY SUCH COURT.

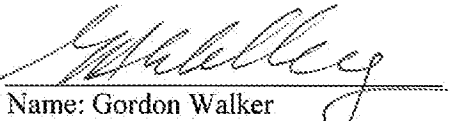
(d) EACH PARTY HERETO IRREVOCABLY CONSENTS TO SERVICE OF PROCESS IN THE MANNER PROVIDED FOR NOTICES IN SECTION 10.02 OF THE CREDIT AGREEMENT. NOTHING IN THIS IP SECURITY AGREEMENT WILL AFFECT THE RIGHT OF ANY PARTY HERETO TO SERVE PROCESS IN ANY OTHER MANNER PERMITTED BY APPLICABLE LAW.

(e) EACH PARTY TO THIS IP SECURITY AGREEMENT HEREBY EXPRESSLY WAIVES ANY RIGHT TO TRIAL BY JURY OF ANY CLAIM, DEMAND, ACTION OR CAUSE OF ACTION ARISING UNDER THIS IP SECURITY AGREEMENT OR IN ANY WAY CONNECTED WITH OR RELATED OR INCIDENTAL TO THE DEALINGS OF THE PARTIES HERETO OR ANY OF THEM WITH RESPECT TO THIS IP SECURITY AGREEMENT, OR THE TRANSACTIONS RELATED THERETO, IN EACH CASE WHETHER NOW EXISTING OR HEREAFTER ARISING, AND WHETHER FOUNDED IN CONTRACT OR TORT OR OTHERWISE; AND EACH PARTY HEREBY AGREES AND CONSENTS THAT ANY SUCH CLAIM, DEMAND, ACTION OR CAUSE OF ACTION SHALL BE DECIDED BY COURT TRIAL WITHOUT A JURY, AND THAT ANY PARTY TO THIS IP SECURITY AGREEMENT MAY FILE AN ORIGINAL COUNTERPART OR A COPY OF SECTION 10.17 OF THE CREDIT AGREEMENT WITH ANY COURT AS WRITTEN EVIDENCE OF THE CONSENT OF THE SIGNATORIES HERETO TO THE WAIVER OF THEIR RIGHT TO TRIAL BY JURY.

*[Remainder of page left intentionally blank]*


IN WITNESS WHEREOF, each Grantor and the Collateral Agent have caused this IP Security Agreement to be duly executed and delivered by its officer thereunto duly authorized as of the date first written above.

**VECTRA CO.  
EAGLEPICHER TECHNOLOGIES, LLC  
DUKE FINANCE SUBSIDIARY HOLDINGS, LLC.**

By:   
Name: Gordon Walker  
Title: President and Chief Executive Officer



**JEFFERIES FINANCE LLC,**  
as Collateral Agent

By: \_\_\_\_\_   
Name: Jason Kennedy  
Title: Managing Director

**SCHEDULE A**

**Patents, Trademarks and Copyrights**

U.S. Issued Patents

<b>Title</b>	<b>App. No.</b>	<b>App. Date</b>	<b>Patent Number</b>	<b>Grant Date</b>	<b>Owner</b>
FET ARRAY BYPASS MODULE	14538196	November 11, 2014	9455703	September 27, 2016	EAGLEPICHER TECHNOLOGIES, LLC
LAYERED COMPOSITE CURRENT COLLECTOR WITH PLURALITY OF OPENINGS, METHODS OF MANUFACTURE THEREOF, AND ARTICLES INCLUDING THE SAME	13157981	June 10, 2011	9548497	January 17, 2017	EAGLEPICHER TECHNOLOGIES, LLC
ELECTROLYTE MATERIALS, THERMAL BATTERY COMPONENTS, AND THERMAL BATTERIES FOR INTERMEDIATE TEMPERATURE APPLICATIONS	13240350	September 22, 2011	9306223	April 5, 2016	EAGLEPICHER TECHNOLOGIES, LLC
SYSTEM AND METHOD FOR VERIFYING THE CORRECT ORDERING OF A STACK OF COMPONENTS	12755177	April 6, 2010	8374311	February 12, 2013	EAGLEPICHER TECHNOLOGIES, LLC
SYSTEMS AND METHODS FOR DETERMINING BATTERY STATE-OF-HEALTH	13588580	August 17, 2012	9244132	January 26, 2016	EAGLEPICHER TECHNOLOGIES, LLC
NON-AQUEOUS CELL HAVING AMORPHOUS OR SEMI-CRYSTALLINE COPPER MANGANESE OXIDE CATHODE MATERIAL	12614667	November 9, 2009	8669007	March 11, 2014	EAGLEPICHER TECHNOLOGIES, LLC
END OF LIFE INDICATION SYSTEM AND METHOD FOR NON-AQUEOUS CELL HAVING AMORPHOUS OR SEMI-CRYSTALLINE COPPER MANGANESE OXIDE CATHODE MATERIAL	12718743	March 5, 2010	8663825	March 4, 2014	EAGLEPICHER TECHNOLOGIES, LLC

Title	App. No.	App. Date	Patent Number	Grant Date	Owner
HYBRID ENERGY STORAGE SYSTEM, RENEWABLE ENERGY SYSTEM INCLUDING THE STORAGE SYSTEM AND METHOD OF USING SAME	13836809	March 15, 2013	8638061	January 28, 2014	EAGLEPICHER TECHNOLOGIES, LLC
HYBRID ENERGY STORAGE SYSTEM, RENEWABLE ENERGY SYSTEM INCLUDING THE STORAGE SYSTEM AND METHOD OF USING SAME	14694682	April 23, 2015	RE46156	September 20, 2016	EAGLEPICHER TECHNOLOGIES, LLC
THERMAL BATTERY CATHODE MATERIALS CONTAINING NICKEL DISULFIDE AND BATTERIES INCLUDING SAME	13161614	June 16, 2011	8652674	February 18, 2014	EAGLEPICHER TECHNOLOGIES, LLC
THERMAL BATTERY ELECTROLYTE MATERIALS, ELECTRODE-ELECTROLYTE COMPOSITES, AND BATTERIES INCLUDING SAME	12754405	April 5, 2010	8394520	March 12, 2013	EAGLEPICHER TECHNOLOGIES, LLC
THERMAL BATTERY CATHODE MATERIALS AND BATTERIES INCLUDING SAME	12754417	April 5, 2010	8440342	May 14, 2013	EAGLEPICHER TECHNOLOGIES, LLC
NON-AQUEOUS ELECTROCHEMICAL CELL HAVING A MIXTURE OF AT LEAST THREE CATHODE MATERIALS THEREIN	12725872	March 17, 2010	8623553	January 7, 2014	EAGLEPICHER TECHNOLOGIES, LLC
RESERVE BATTERY TO PROVIDE POWER FOR SUBSEA APPLICATIONS	13735480	January 7, 2013	8997875	April 7, 2015	EAGLEPICHER TECHNOLOGIES, LLC; CAMERON INTERNATIONAL CORPORATION
LOW PROFILE IGNITER	13472027	May 15, 2012	8925461	January 6, 2015	EAGLEPICHER TECHNOLOGIES, LLC
POWER SUPPLY APPARATUS WITH RESERVE BATTERY MODULES AND METHOD FOR PROVIDING BACKUP POWER	13760746	February 6, 2013	9184451	November 10, 2015	EAGLEPICHER TECHNOLOGIES, LLC and Cameron International Corporation
CONTOURED BATTERY CASE SHAPES BASED ON CELL SHAPES	13909510	June 4, 2013	9190642	November 17, 2015	EAGLEPICHER TECHNOLOGIES, LLC

Title	App. No.	App. Date	Patent Number	Grant Date	Owner
LITHIUM-SULFUR BATTERY WITH PERFORMANCE ENHANCED ADDITIVES	13617858	September 14, 2012	9023518	May 5, 2015	EAGLEPICHER TECHNOLOGIES, LLC
UNDERWATER CHARGING STATION	13961405	August 7, 2013	9531199	December 27, 2016	EAGLEPICHER TECHNOLOGIES, LLC
BATTERY WITH COMPLETE DISCHARGE DEVICE	10792367	March 3, 2004	7190147	March 13, 2007	EAGLEPICHER TECHNOLOGIES, LLC
MODULAR ENERGY STORAGE DEVICE AND METHOD OF MAKING THE SAME	11934747	November 3, 2007	7826197	November 2, 2010	EAGLEPICHER TECHNOLOGIES, LLC
LITHIUM-SULFUR BATTERY AND CATHODE THEREFORE	12396118	March 2, 2009	8252461	August 28, 2012	EAGLEPICHER TECHNOLOGIES, LLC
PHYSICAL KEY TO FACILITATE AN INACTIVE MODE FOR A STATE-OF-CHARGE INDICATOR WITHIN A BATTERY	10906515	February 23, 2005	7176806	February 13, 2007	EAGLEPICHER TECHNOLOGIES, LLC
PHYSICAL KEY TO FACILITATE AN INACTIVE MODE FOR A STATE-OF-CHARGE INDICATOR WITHIN A BATTERY	11674515	February 13, 2007	7482941	January 27, 2009	EAGLEPICHER TECHNOLOGIES, LLC
PHYSICAL KEY TO FACILITATE AN INACTIVE MODE STATE-OF-CHARGE INDICATOR WITHIN A BATTERY	12345048	December 29, 2008	7868777	January 11, 2011	EAGLEPICHER TECHNOLOGIES, LLC
PHYSICAL KEY TO FACILITATE AN INACTIVE MODE FOR A STATE-OF-CHARGE INDICATOR WITHIN A BATTERY	12960016	December 3, 2010	8044814	October 25, 2011	EAGLEPICHER TECHNOLOGIES, LLC
SYSTEM AND METHOD FOR MANUFACTURING A THERMAL BATTERY	11670890	February 2, 2007	8052764	November 8, 2011	EAGLEPICHER TECHNOLOGIES, LLC
AUTOMATED TRACKING AND STORAGE SYSTEM FOR USE WITH AN AUTOMATED THERMAL BATTERY MANUFACTURING SYSTEM	11670901	February 2, 2007	7875088	January 25, 2011	EAGLEPICHER TECHNOLOGIES, LLC

Title	App. No.	App. Date	Patent Number	Grant Date	Owner
AUTOMATED TRACKING AND STORAGE SYSTEM FOR USE WITH AN AUTOMATED THERMAL BATTERY MANUFACTURING SYSTEM	12969002	December 15, 2010	8001677	August 23, 2011	EAGLEPICHER TECHNOLOGIES, LLC
ACTIVATION MECHANISM FOR A RESERVE BATTERY CELL	12762014	April 16, 2010	8603658	December 10, 2013	EAGLEPICHER TECHNOLOGIES, LLC
SYSTEM AND METHOD FOR NONDESTRUCTIVE TESTING OF THERMAL BATTERIES	11162061	August 26, 2005	7545147	June 9, 2009	EAGLEPICHER TECHNOLOGIES, LLC
SYSTEM AND METHOD FOR NONDESTRUCTIVE TESTING OF THERMAL BATTERIES	12432592	April 29, 2009	8570046	October 29, 2013	EAGLEPICHER TECHNOLOGIES, LLC
METHOD AND SYSTEM FOR CELL EQUALIZATION WITH ISOLATED CHARGING SOURCES	11163668	October 26, 2005	7928691	April 19, 2011	EAGLEPICHER TECHNOLOGIES, LLC
METHOD AND SYSTEM FOR CELL EQUALIZATION WITH SWITCHED CHARGING SOURCES	12498210	July 6, 2009	7821230	October 26, 2010	EAGLEPICHER TECHNOLOGIES, LLC
SYSTEM AND METHOD FOR MANUFACTURING A THERMAL BATTERY	11670856	February 2, 2007	7871447	January 18, 2011	EAGLEPICHER TECHNOLOGIES, LLC
SYSTEM AND METHOD FOR MANUFACTURING A THERMAL BATTERY	12965081	December 10, 2010	7926169	April 19, 2011	EAGLEPICHER TECHNOLOGIES, LLC
THERMAL BATTERY	09587444	June 5, 2000	6475662	November 5, 2002	EAGLEPICHER TECHNOLOGIES, LLC
METHOD AND SYSTEM FOR CELL EQUALIZATION WITH CHARGING SOURCES AND SHUNT REGULATORS	12497372	July 2, 2009	7825629	November 2, 2010	EAGLEPICHER TECHNOLOGIES, LLC
PROCESS OF FORMING A NICKEL ELECTRODE	09208132	December 9, 1998	6193871	February 27, 2001	EAGLEPICHER TECHNOLOGIES, LLC
ELECTRICAL POWER GENERATOR	09613890	July 11, 2000	6376944	April 23, 2002	EAGLEPICHER TECHNOLOGIES, LLC
TEMPERATURE COMPENSATED BATTERY CHARGER SYSTEM	09109961	July 2, 1998	6016048	January 18, 2000	EAGLEPICHER TECHNOLOGIES, LLC
BATTERY CHARGER AND CHARGE CONTROL SYSTEM	10051402	January 18, 2002	6518726	February 11, 2003	EAGLEPICHER TECHNOLOGIES, LLC

Title	App. No.	App. Date	Patent Number	Grant Date	Owner
ELECTROCHEMICAL DEVICE	12023573	January 31, 2008	8048557	November 1, 2011	EAGLEPICHER TECHNOLOGIES, LLC
ELECTROCHEMICAL BATTERIES WITH RESTRICTED LIQUID ELECTROLYTE VOLUME	09102436	June 22, 1998	6207318	March 27, 2001	Bluestar Advanced Technology Corp.
LITHIUM-SULFUR BATTERY AND METHODS OF PREVENTING INSOLUBLE SOLID LITHIUM-POLYSULFIDE DEPOSITION	14038337	September 26, 2013	9455447	September 27, 2016	EAGLEPICHER TECHNOLOGIES, LLC
AUTOCLAVABLE BATTERY PACK	10287727	November 4, 2002	6756766	June 29, 2004	EAGLEPICHER TECHNOLOGIES, LLC
RESERVE BATTERY WITH SET BACK MECHANISM FOR DELAYED BATTERY ACTIVATION	10924000	August 23, 2004	7504177	March 17, 2009	EAGLEPICHER TECHNOLOGIES, LLC
NON-AQUEOUS ELECTROLYTES FOR LITHIUM ELECTROCHEMICAL CELLS	10289784	November 7, 2002	6852446	February 8, 2005	EAGLEPICHER TECHNOLOGIES, LLC
LIQUID RETAINING PRESSURE RELIEF VALVE FOR BATTERY CELLS	11085714	March 18, 2005	8003242	August 23, 2011	EAGLEPICHER TECHNOLOGIES, LLC
ACTIVATION MECHANISM FOR A RESERVE BATTERY CELL	14033838	September 23, 2013	9647276	May 9, 2017	EAGLEPICHER TECHNOLOGIES, LLC
CERAMIC ENCLOSED THERMAL BATTERY	13738511	January 10, 2013	9735434	August 15, 2017	EAGLEPICHER TECHNOLOGIES, LLC
Hybrid energy storage system, renewable energy system including the storage system, and method of using same	12/752675	01-Apr-2010	8427098	23-Apr-2013	EaglePicher Technologies, LLC
LITHIUM-SULFUR BATTERY AND METHODS OF REDUCING INSOLUBLE SOLID LITHIUM-POLYSULFIDE DEPOSITION	14037993	26-Sep-2013	9882243	30-Jun-2018	EaglePicher Technologies, LLC
ALKALI METAL HALIDE CELLS	14/656,669	12-Mar-2015	9893383	Feb 13, 2018	EaglePicher Technologies, LLC

U.S. Patent Applications

<b>Title</b>	<b>App. No.</b>	<b>App. Date</b>	<b>Status</b>	<b>Owner</b>
BATTERY HAVING HIGH THERMAL CONDUCTIVITY CASE	14958298	December 3, 2015	Pending -under Examination	EaglePicher Technologies, LLC
HIGH ENERGY DENSITY NON-AQUEOUS ELECTROCHEMICAL CELL WITH EXTENDED OPERATING TEMPERATURE WINDOW	14054454	October 15, 2013	Allowed	EaglePicher Technologies, LLC
WOUND THERMAL BATTERIES AND METHODS OF MANUFACTURING THE SAME	13839824	March 15, 2013	Pending - under Examination	EaglePicher Technologies, LLC
WELDING ALONG A SEAM USING A MULTIPLE-POINT ALIGNMENT METHOD	13748033	January 23, 2013	Pending - under Examination	EaglePicher Technologies, LLC
LI-SI-SN ALLOY, ANODE MATERIAL OF THE ALLOY, AND BATTERIES INCLUDING SAME	13790346	March 8, 2013	Pending - under Examination	EaglePicher Technologies, LLC
AN ELECTROLYTE, A BATTERY INCLUDING THE SAME, AND METHODS OF REDUCING ELECTROLYTE FLAMMABILITY	14730590	June 4, 2015	Pending - under Examination	EaglePicher Technologies, LLC
THERMAL BATTERY AND METHODS OF ACTIVATION	14887992	October 20, 2015	Pending - not yet examined	EaglePicher Technologies, LLC
METHODS FOR MANUFACTURING PYROTECHNIC MATERIAL FOR THERMAL BATTERIES	15289099	October 7, 2016	Pending - under Examination	EaglePicher Technologies, LLC
Implantable Electrochemical Cell	62472522	March 16, 2017	Pending - Non-Provisional not yet filed	EaglePicher Technologies, LLC

## SCHEDULE B

### U.S. Trademarks

<b>Trademark</b>	<b>Serial No.</b>	<b>Filing Date</b>	<b>Registration No.</b>	<b>Registration Dated</b>	<b>Owner</b>
POWERPYR AMID	867214 21	August 11, 2015	5202598	May 16, 2017	EaglePicher Technologies, LLC
EAGLEPICH ER	854882 19	December 6, 2011	4297182	March 5, 2013	EaglePicher Technologies, LLC
CONTEGO	770355 19	November 2, 2006	3402478	March 25, 2008	EaglePicher Technologies, LLC
KEEPER	732710 17	July 21, 1980	1179937	December 1, 1981	EaglePicher Technologies, LLC
CAREFREE	723985 77	July 28, 1971	953058	February 13, 1973	EaglePicher Technologies, LLC
VECTRA	868152 97	November 10, 2015	5346813	November 28, 2017	Duke Finance Subsidiary Holdings, LLC
OMG	744350 00	September 13, 1993	1873473	January 17, 1995	Duke Finance Subsidiary Holdings, LLC



## SCHEDULE C

### U.S. Copyrights

<b>Title</b>	<b>Registration No.</b>	<b>Registration Date</b>	<b>Current Owner of Record</b>
#321 cork	GP113482	—	EaglePicher Technologies, LLC
#372 zebra	GP113484	—	EaglePicher Technologies, LLC
#375 western cedar	GP115230	—	EaglePicher Technologies, LLC
#379 herringbone	GP113483	—	EaglePicher Technologies, LLC
Eagle-Picher giant paint color samples	KK75119	—	EaglePicher Technologies, LLC