



Registration of a Charge

Company name: **AITON & CO LIMITED**

Company number: **03573344**



X8YKSENS

Received for Electronic Filing: **11/02/2020**

Details of Charge

Date of creation: **23/01/2020**

Charge code: **0357 3344 0007**

Persons entitled: **CREDIT AGRICOLE CORPORATE AND INVESTMENT BANK**

Brief description:

Contains fixed charge(s).

Contains negative pledge.

Authentication of Form

This form was authorised by: **a person with an interest in the registration of the charge.**

Authentication of Instrument

Certification statement: **I CERTIFY THAT SAVE FOR MATERIAL REDACTED PURSUANT TO S.859G OF THE COMPANIES ACT 2006 THE ELECTRONIC COPY INSTRUMENT DELIVERED AS PART OF THIS APPLICATION FOR REGISTRATION IS A CORRECT COPY OF THE ORIGINAL INSTRUMENT.**

Certified by: **CHRIS TRAVIS**



CERTIFICATE OF THE REGISTRATION OF A CHARGE

Company number: 3573344

Charge code: 0357 3344 0007

The Registrar of Companies for England and Wales hereby certifies that a charge dated 23rd January 2020 and created by AITON & CO LIMITED was delivered pursuant to Chapter A1 Part 25 of the Companies Act 2006 on 11th February 2020 .

Given at Companies House, Cardiff on 12th February 2020

The above information was communicated by electronic means and authenticated by the Registrar of Companies under section 1115 of the Companies Act 2006



Companies House



THE OFFICIAL SEAL OF THE
REGISTRAR OF COMPANIES

PLEDGE AND SECURITY AGREEMENT

made by

MCDERMOTT INTERNATIONAL, INC.,

and certain of its Subsidiaries

in favor of

CRÉDIT AGRICOLE CORPORATE AND INVESTMENT BANK,
as Collateral Agent

Dated January 23, 2020

I certify that save for material
redacted pursuant to S.859E of the
Companies Act 2006, this copy instrument
is a correct copy of the original instrument.



CHRIS TRAVIS
BRUCEWELL (UK) LLP

TABLE OF CONTENTS

	<u>Page</u>
SECTION 1. DEFINED TERMS.....	1
1.1. Definitions.....	1
1.2. Other Definitional Provisions	9
SECTION 2. [RESERVED].....	10
SECTION 3. GRANT OF SECURITY INTEREST; CONTINUING LIABILITY UNDER COLLATERAL.....	10
SECTION 4. REPRESENTATIONS AND WARRANTIES.....	12
4.1. Representations in Credit Agreement	12
4.2. Title; No Other Liens	12
4.3. Perfected First Priority Liens	12
4.4. Name; Jurisdiction of Organization, etc	13
4.5. Inventory	14
4.6. Farm Products and Canadian Consumer Goods	14
4.7. Investment Property	14
4.8. Receivables	15
4.9. Intellectual Property	15
4.10. UCC Letters of Credit and UCC Letter of Credit Rights.....	17
4.11. Commercial Tort Claims.....	18
4.12. Contracts	18
4.13. Deposit Accounts; Securities Accounts	18
SECTION 5. COVENANTS.	18
5.1. Covenants in Credit Agreement.....	18
5.2. Delivery and Control of Instruments, Chattel Paper, Negotiable Documents and Investment Property	18
5.3. Maintenance of Insurance	20
5.4. Payment of Obligations.....	21
5.5. Maintenance of Perfected Security Interest; Further Documentation.....	21
5.6. Changes in Locations, Name, Jurisdiction of Incorporation, etc	21
5.7. Notices	22
5.8. Investment Property	22
5.9. Receivables	24
5.10. Intellectual Property	24
5.11. Contracts	26
5.12. Commercial Tort Claims.....	26
5.13. Deposit Accounts	26
5.14. Financial Assets	27
SECTION 6. REMEDIAL PROVISIONS.	27
6.1. Certain Matters Relating to Receivables.....	27
6.2. Communications with Obligors; Grantors Remain Liable	28
6.3. Pledged Securities.....	28
6.4. Proceeds to be Turned Over to Collateral Agent	29

TABLE OF CONTENTS
(continued)

	<u>Page</u>
6.5. Application of Proceeds	30
6.6. Code and Other Remedies	30
6.7. Private Sales, etc	32
6.8. Deficiency	32
6.9. Deposit Accounts/Securities Accounts	32
SECTION 7. THE COLLATERAL AGENT	32
7.1. Collateral Agent's Appointment as Attorney-in-Fact, etc	32
7.2. Duty of Collateral Agent	34
7.3. Execution of Financing Statements	35
7.4. Authority of Collateral Agent	35
7.5. Appointment of Co-Collateral Agents	35
SECTION 8. MISCELLANEOUS	35
8.1. Amendments in Writing	36
8.2. Notices	36
8.3. No Waiver by Course of Conduct; Cumulative Remedies	36
8.4. Enforcement Expenses; Indemnification	36
8.5. Successors and Assigns	36
8.6. Set-Off	37
8.7. Counterparts	37
8.8. Severability	37
8.9. Section Headings	37
8.10. Integration	37
8.11. APPLICABLE LAW	38
8.12. Submission to Jurisdiction; Waivers	38
8.13. Acknowledgments	39
8.14. Additional Grantors	39
8.15. Releases	39
8.16. WAIVER OF JURY TRIAL	40
8.17. Riders for Certain Jurisdictions	40
8.18. Excluded Subsidiaries	45
8.19. Intellectual Property Filings	45
8.20. Collateral Agency Agreement; DIP Orders	46

TABLE OF CONTENTS
(continued)

SCHEDULE 4.3 — PERFECTED FIRST PRIORITY LIENS

SCHEDULE 4.4 — NAME; JURISDICTION OF ORGANIZATION, ETC.

SCHEDULE 4.5 — INVENTORY LOCATIONS

SCHEDULE 4.7 — INVESTMENT PROPERTY

SCHEDULE 4.9 — INTELLECTUAL PROPERTY

SCHEDULE 4.11 — COMMERCIAL TORT CLAIMS

SCHEDULE 4.12 — EXCLUDED PLEDGED COLLATERAL

SCHEDULE 4.13— DEPOSIT ACCOUNTS AND SECURITIES ACCOUNTS

SCHEDULE 8.2 — NOTICES

EXHIBIT A — ACKNOWLEDGEMENT AND CONSENT

EXHIBIT B — FORM OF INTELLECTUAL PROPERTY SECURITY AGREEMENT

ANNEX 1 — FORM OF ASSUMPTION AGREEMENT

This Pledge and Security Agreement dated as of January 23, 2020 (as amended, restated, amended and restated, supplemented, or otherwise modified from time to time, this "Agreement") is executed by each of the undersigned (together with any other grantor that may become a party hereto as provided in Section 8.14, each, individually a "Grantor" and collectively, the "Grantors"), in favor of Crédit Agricole Corporate and Investment Bank, acting through one or more of its branches or affiliates, as collateral agent (in such capacity and together with its successors in such capacity, the "Collateral Agent"), for the benefit of the Secured Parties (as defined in the Credit Agreement).

This Agreement is given in connection with (i) the Superpriority Senior Secured Debtor-in-Possession Credit Agreement, dated as of the date hereof (as amended, restated, supplemented, or otherwise modified from time to time, the "Credit Agreement"), among McDermott Technology (Americas), Inc., a Delaware corporation, McDermott Technology (US), Inc., a Delaware corporation, and McDermott Technology, B.V., a private company with limited liability (*besloten vennootschap met beperkte aansprakelijkheid*) incorporated under the laws of the Netherlands (each a "Borrower" and collectively the "Borrowers"), McDermott International, Inc., a Panamanian corporation (the "Parent"), Crédit Agricole Corporate and Investment Bank as Revolving Administrative Agent (as defined in the Credit Agreement), Barclays Bank PLC as Term Loan Administrative Agent (as defined in the Credit Agreement), and the lenders from time to time parties thereto, and (ii) the other Loan Documents (as defined in the Credit Agreement).

In connection with the Credit Agreement and the other Loan Documents, certain Secured Parties (as defined in the Credit Agreement) have entered into the Collateral Agency Agreement, dated as of the date hereof (as the same may be amended, amended and restated, supplemented or otherwise modified, renewed or replaced from time to time, the "Collateral Agency Agreement"), among the Collateral Agent, Barclays Bank PLC as Term Loan Administrative Agent, Crédit Agricole Corporate and Investment Bank as Revolving Administrative Agent, the Borrowers, the Parent, and the other "Grantors" party thereto from time to time, pursuant to which each of the Administrative Agents, on behalf of itself and the other Secured Parties, appointed the Collateral Agent as their agent, for the ratable benefit of all the Secured Parties, in connection with, among other things, this Agreement.

Each Grantor hereby agrees with the Collateral Agent, for the benefit of the Secured Parties, as follows:

SECTION 1 DEFINED TERMS.

1.1 Definitions.

(a) Unless otherwise defined herein, terms defined in the Credit Agreement and used herein have the meanings given to them in the Credit Agreement. The following terms are used herein as defined in the New York UCC (and if defined in more than one Article of the New York UCC, such terms have the meanings given in Article 9 thereof): Accounts, Account Debtor, As-Extracted Collateral, Certificated Security, Chattel Paper, Commercial Tort Claim, Commodity Account, Commodity Contract, Commodity Intermediary, Documents, Deposit Account, Electronic Chattel Paper, Equipment, Farm Products, Financial Asset, Fixtures, General Intangibles, Goods, Instruments, Inventory,

Money, Payment Intangibles, Securities Account, Securities Intermediary, Security, Security Entitlement, Supporting Obligations, Tangible Chattel Paper and Uncertificated Security. References in this Agreement to the New York UCC, the UCC or the Uniform Commercial Code or to terms defined respectively therein shall, as the context requires and in respect of any Collateral located in Canada or any Collateral for which any filing or perfection steps will be taken in Canada, include references to the equivalent or applicable provisions of the personal property security Laws of an applicable Canadian province or territory (or to any other relevant Canadian Laws, including in respect of any securities transfer requirements) (the “PPSA”).

(b) The following terms shall have the following meanings:

“After-Acquired Intellectual Property” has the meaning assigned to such term in Section 5.10(i).

“Agreement” has the meaning assigned to such term in the preamble.

“Bailee” means, as applicable, any gratuitous bailee for, or representative or agent of, the Collateral Agent that is appointed by the Collateral Agent in writing.

“Borrowers” has the meaning assigned to such term in the preamble to this Agreement.

“Canadian Consumer Goods” means Consumer Goods (as defined in personal property security Laws of an applicable Canadian province or territory) of any Canadian Grantor.

“Canadian Grantor” means each Grantor that is incorporated or established in Canada, including in any province or territory of Canada.

“Cash Secured LC Cash Collateral Accounts” means (i) Account No. 001-108637-0060-00 maintained by McDermott Technology (US), Inc., as customer, with Crédit Agricole Corporate and Investment Bank, as the depositary bank, and (ii) the Cash Secured LC Cash Collateral Account (as defined in the Credit Agreement).

“Cash Secured LC Cash Collateral Account Control Agreements” means (i) the Securities Account Control Agreement dated as of the May 10, 2018 among McDermott Technology (US), Inc., as customer, Crédit Agricole Corporate and Investment Bank, as collateral agent, and Crédit Agricole Corporate and Investment Bank, as the depositary bank, and (ii) Cash Secured LC Cash Collateral Account Control Agreement (as defined in the Credit Agreement).

“Collateral” has the meaning assigned to such term in Section 3.

“Collateral Account” means any collateral account established by the Collateral Agent as provided in Sections 6.1 or 6.4.

“Collateral Account Funds” means, collectively, the following: all funds (including all trust monies) and investments (including all cash equivalents) credited to, or purchased with funds from, any Collateral Account and all certificates and instruments from time to time representing or evidencing such investments; all Money, notes, certificates of deposit, checks and other

instruments from time to time hereafter delivered to or otherwise possessed by the Collateral Agent for or on behalf of any Grantor in substitution for, or in addition to, any or all of the Collateral; and all interest, dividends, cash, instruments and other property from time to time received in, receivable or otherwise distributed to the Collateral Account in respect of or in exchange for any or all of the items constituting Collateral.

"Collateral Agency Agreement" has the meaning assigned to such term in the preamble to this Agreement.

"Collateral Agent" has the meaning assigned to such term in the preamble to this Agreement.

"Contracts" means all contracts and agreements between any Grantor and any other Person (in each case, whether written or oral, or third party or intercompany) as the same may be amended, assigned, extended, restated, supplemented, replaced or otherwise modified from time to time including (i) all rights of any Grantor to receive moneys due and to become due to it thereunder or in connection therewith, (ii) all rights of any Grantor to receive proceeds of any insurance, indemnity, warranty or guaranty with respect thereto, (iii) all rights of any Grantor to damages arising thereunder and (iv) all rights of any Grantor to terminate and to perform and compel performance of, such Contracts and to exercise all remedies thereunder.

"Copyright Licenses" means any agreement, whether written or oral, naming any Grantor as licensor or licensee (including those listed in Schedule 4.9 (as such schedule may be amended or supplemented from time to time)), granting any right in, to or under any Copyright, including the grant of rights to publicly perform, display, copy, prepare derivative works or distribute under any Copyright. This term shall exclude implied licenses and any rights obtained or granted under a copyright pursuant to the doctrines of first sale or estoppel.

"Copyrights" means (i) all copyrights arising under applicable Laws, whether registered or unregistered and whether published or unpublished (including those listed in Schedule 4.9 (as such schedule may be amended or supplemented from time to time)), all registrations and recordings thereof, and all applications in connection therewith and rights corresponding thereto throughout the world, including all registrations, recordings and applications in the United States Copyright Office, and all mask works (as defined in 17 USC 901), (ii) the right to, and to obtain, all extensions and renewals thereof, and the right to sue for past, present and future infringements of any of the foregoing, (iii) all proceeds of the foregoing, including license, royalties, income, payments, claims, damages, and proceeds of suit and (iv) all other rights of any kind whatsoever accruing thereunder or pertaining thereto.

"Credit Agreement" has the meaning assigned to such term in the preamble to this Agreement.

"Excluded Accounts" means: (i) Deposit Accounts exclusively used for payroll, payroll taxes and other employee wage and benefit payments to or for the benefit of a Grantor's employees (including, without limitation, pension fund accounts and 401(k) accounts); (ii) Deposit Accounts exclusively used for taxes (including, without limitation, sales taxes); (iii) Special Purpose Escrow

Accounts, (iv) Restricted Cash Collateral Accounts; (v) Fiduciary Accounts; and (vi) the Cash Secured LC Cash Collateral Accounts.

"Excluded Assets" means: (i) any lease, license, contract, property right (including, without limitation, interests in Inventory) or agreement to which any Grantor is a party or any of its rights or interests thereunder if and only for so long as the grant of a security interest hereunder shall constitute or result in a breach, termination or default under any such lease, license, contract, property right or agreement (other than to the extent that any such term would be rendered ineffective pursuant to Sections 9-406, 9-407, 9-408 or 9-409 of the UCC of any relevant jurisdiction or any other applicable Laws or principles of equity); provided, however, that such security interest shall attach immediately to any portion of such lease, license, contract, property rights or agreement that does not result in any of the consequences specified above; (ii) all Excluded Accounts and the funds or other property held in or maintained in such Excluded Accounts; (iii) all Stock and Stock Equivalents of each Captive Insurance Subsidiary; (iv) all Stock and Stock Equivalents of any Unrestricted Subsidiary to the extent that, and only for so long as, such Stock and Stock Equivalents are pledged to secure indebtedness of such Unrestricted Subsidiary; (v) any intent-to-use Trademark application prior to the filing of a "Statement of Use" or "Amendment to Allege Use" with respect thereto, to the extent, if any, that, and solely during the period, if any, in which, the grant of a security interest therein would impair the validity or enforceability of such intent-to-use Trademark application under applicable federal Law, (vi) Canadian Consumer Goods or any assets or property subject to a lease or agreement for the lease of real property in Canada to the extent it is the last day of the term of such lease or agreement (and such assets or property shall be held in trust on such last day by the applicable Grantor for the Collateral Agent and, on the exercise by the Collateral Agent of any of its remedial rights or remedies under this Agreement, shall be assigned by the applicable Grantor as directed by the Collateral Agent); (vii) [reserved]; and (viii) the Separate Collateral.

"Fiduciary Account" means any fiduciary or trust account held by a Grantor which is not a Material Account (other than as a result of clause (iv) of the definition thereof).

"Grantors" has the meaning assigned to such term in the preamble to this Agreement.

"Insurance" means all insurance policies covering any or all of the Collateral (regardless of whether the Collateral Agent is named as additional insured or loss payee thereof).

"Intellectual Property" means the collective reference to all intellectual property rights arising under applicable Laws, including the Copyrights, the Copyright Licenses, the Patents, the Patent Licenses, the Trademarks, the Trademark Licenses, the Trade Secrets and the Trade Secret Licenses, and all other intellectual property of any type, including mask works and industrial designs.

"Intellectual Property Security Agreement" means an Intellectual Property Security Agreement in substantially the form of Exhibit B or such other form as may be approved by the Collateral Agent.

"Intercompany Note" means any promissory note evidencing Indebtedness permitted to be incurred pursuant to Section 8.1(f) of the Credit Agreement with respect to any outstanding intercompany obligations and advances owed by or to a Loan Party.

"Investment Property" means the collective reference to (i) all "investment property" as such term is defined in Section 9-102(a)(49) of the New York UCC, including all Certificated Securities and Uncertificated Securities, all Security Entitlements, all Commodity Contracts and all Commodity Accounts and (ii) whether or not otherwise constituting "investment property," all Pledged Notes, all Pledged Equity Interests, and all Pledged Commodity Contracts.

"Ireland" means Ireland (exclusive of Northern Ireland).

"Laws" means, collectively, all international (including any union of countries, or any political subdivision thereof), foreign (including for the avoidance of doubt the laws of any jurisdiction in which any Grantor is incorporated or registered), federal, state, provincial, territorial or other political subdivision (including the District of Columbia and any territory or possession of the United States, including those specified in Section 5.2), county, municipal and local constitutions, statutes, treaties, rules, guidelines, regulations, ordinances, codes and administrative or judicial precedents or authorities.

"Licensed Intellectual Property" has the meaning assigned to such term in Section 4.9(a).

"Material Account" means any Deposit Account (other than any Excluded Account) or Securities Account (other than any Excluded Account) of a Grantor (i) listed on Schedule 4.13, (ii) that serves as the functional replacement of a Deposit Account or Securities Account listed on Schedule 4.13, (iii) that regularly receives payments from customers on any material contract that are not transferred to another account that constitutes a Material Account within one Business Day of receipt thereof or (iv) with a minimum daily average balance of at least (A) with respect to any such Deposit Account or Securities Account located in the District of Columbia and any territory or possession of the United States, the Netherlands, Canada, Cayman Islands and Panama, \$100,000 and (B) otherwise, \$10,000,000 (in each case, other than any disbursement account that is primarily used to make vendor or other third party payments and which does not receive payments from customers on any material contracts); provided that, the definition of "Material Account" shall exclude any Deposit Account or Securities Account that regularly receives payments from customers on any material contract if amounts on deposit therein are transferred to an account that constitutes a Material Account within three Business Days of such amounts on deposit therein exceeding (A) with respect to any such Deposit Account or Securities Account located in the District of Columbia and any territory or possession of the United States or Netherlands, \$150,000 and (B) otherwise, \$15,000,000.

"Material Contract" means any Contract the termination of which could reasonably be expected to have a Material Adverse Effect.

"Material Intellectual Property" has the meaning assigned to such term in Section 4.9(b).

"New York UCC" means the Uniform Commercial Code as from time to time in effect in the State of New York.

"Owned Intellectual Property" has the meaning assigned to such term in Section 4.9(a).

"Patent License" means all agreements, whether written or oral, providing for the grant by or to any Grantor of any right to make, use, import, offer for sale, or sell any invention covered in whole or in part by a Patent, including any of the foregoing listed in Schedule 4.9 (as such schedule may be amended or supplemented from time to time). This term shall exclude implied licenses and any rights obtained or granted under a patent pursuant to the doctrines of exhaustion or estoppel.

"Patents" means (i) all United States patents, patents issued by any other country, union of countries or any political subdivision of any of the foregoing, and all reissues and extensions thereof, including any of the foregoing listed in Schedule 4.9 (as such schedule may be amended or supplemented from time to time), (ii) all patent applications pending in the United States or any other country or union of countries or any political subdivision of any of the foregoing and all divisions, continuations and continuations-in-part thereof, including any of the foregoing listed in Schedule 4.9 (as such schedule may be amended or supplemented from time to time), (iii) all rights to, and to obtain, any reissues or extensions of the foregoing and (iv) all proceeds of the foregoing, including licenses, royalties, income, payments, claims, damages and proceeds of suit.

"Pledge and Security Termination Date" means such time as each of these conditions have occurred: (a) the Final Satisfaction Date and (b) the payment or otherwise satisfaction in full in cash of all other Obligations (other than in respect of any contingent indemnification or expense reimbursement obligations for which no claim has been asserted and to the extent not yet due and payable) and the expiration or termination of all commitments under the Credit Agreement.

"Pledged Alternative Equity Interests" means all interests of any Grantor in participation or other interests in any equity or profits of any business entity and the certificates, if any, representing such interests and all dividends, distributions, cash, warrants, rights, options, instruments, securities and other property or proceeds from time to time received, receivable or otherwise distributed in respect of or in exchange for any or all of such interests and any other warrant, right or option to acquire any of the foregoing; provided, however, that Pledged Alternative Equity Interests shall not include any Pledged Stock, Pledged Partnership Interests, Pledged LLC Interests or Pledged Trust Interests.

"Pledged Commodity Contracts" means all commodity contracts listed on Schedule 4.7 (as such schedule may be amended from time to time) and all other Commodity Contracts to which any Grantor is party from time to time.

"Pledged Equity Interests" means all Pledged Stock, Pledged LLC Interests, Pledged Partnership Interests, Pledged Trust Interests and Pledged Alternative Equity Interests.

"Pledged LLC Interests" means all interests of any Grantor now owned or hereafter acquired in any limited liability company, including all limited liability company interests listed on Schedule 4.7 hereto under the heading "Pledged LLC Interests" (as such schedule may be amended or supplemented from time to time) and the certificates, if any, representing such limited liability company interests and any interest of such Grantor on the books and records of such limited liability company and all dividends, distributions, cash, warrants, rights, options,

instruments, securities and other property or proceeds from time to time received, receivable or otherwise distributed in respect of or in exchange for any or all of such limited liability company interests and any other warrant, right or option to acquire any of the foregoing.

"Pledged Notes" means all promissory notes now owned or hereafter acquired by any Grantor, including those listed on Schedule 4.7 (as such schedule may be amended or supplemented from time to time) and all Intercompany Notes at any time issued to or held by any Grantor (other than (i) promissory notes in an aggregate principal amount not to exceed \$5,000,000 at any time outstanding issued in connection with extensions of trade credit by any Grantor in the ordinary course of business and (ii) promissory notes constituting Cash Equivalents that are held by any Grantor).

"Pledged Partnership Interests" means all interests of any Grantor now owned or hereafter acquired in any general partnership, limited partnership, limited liability partnership or other partnership, including all partnership interests listed on Schedule 4.7 hereto under the heading "Pledged Partnership Interests" (as such schedule may be amended or supplemented from time to time) and the certificates, if any, representing such partnership interests and any interest of such Grantor on the books and records of such partnership and all dividends, distributions, cash, warrants, rights, options, instruments, securities and other property or proceeds from time to time received, receivable or otherwise distributed in respect of or in exchange for any or all of such partnership interests and any other warrant, right or option to acquire any of the foregoing.

"Pledged Securities" means the collective reference to the Pledged Notes and the Pledged Equity Interests.

"Pledged Stock" means all shares of capital stock now owned or hereafter acquired by any Grantor, including all shares of capital stock listed on Schedule 4.7 hereto under the heading "Pledged Stock" (as such schedule may be amended or supplemented from time to time), and the certificates, if any, representing such shares and any interest of such Grantor in the entries on the books of the issuer of such shares and all dividends, distributions, cash, warrants, rights, options, instruments, securities and other property or proceeds from time to time received, receivable or otherwise distributed in respect of or in exchange for any or all of such shares and any other warrant, right or option to acquire any of the foregoing.

"Pledged Trust Interests" means all interests of any Grantor now owned or hereafter acquired in a Delaware business trust or other trust, including all trust interests listed on Schedule 4.7 hereto under the heading "Pledged Trust Interests" (as such schedule may be amended or supplemented from time to time) and the certificates, if any, representing such trust interests and any interest of such Grantor on the books and records of such trust or on the books and records of any Securities Intermediary pertaining to such interest and all dividends, distributions, cash, warrants, rights, options, instruments, securities and other property or proceeds from time to time received, receivable or otherwise distributed in respect of or in exchange for any or all of such trust interests and any other warrant, right or option to acquire any of the foregoing.

"PPSA" has the meaning set forth in Section 1.1(a) of this Agreement.

"Proceeds" means all "proceeds" as such term is defined in Section 9-102(a)(64) of the New York UCC and, in any event, shall include all dividends or other income from the Investment Property, collections thereon or distributions or payments with respect thereto.

"Receivable" means all Accounts and any other right to payment for goods or other property sold, leased, licensed or otherwise disposed of or for services rendered, whether or not such right is evidenced by an Instrument or Chattel Paper or classified as a Payment Intangible and whether or not it has been earned by performance. References herein to Receivables shall include any Supporting Obligation or collateral securing such Receivable.

"Restricted Cash Collateral Accounts" means any restricted cash collateral account held by a Grantor where the deposits or proceeds of such account are used primarily to support letters of credit (other than any Letters of Credit), bank guarantees or other similar obligations, and exposure from Swap Obligations, and which is not a Material Account (other than as a result of clause (iv) of the definition thereof).

"Securities Act" means the Securities Act of 1933, as amended.

"Separate Collateral" means (i) each "Account" (as defined in each of the Cash Secured LC Cash Collateral Account Control Agreements), and (ii) all "Securities" (as defined in each of the Cash Secured LC Cash Collateral Account Control Agreements).

"Special Purpose Escrow Account" means any escrow account held by a Grantor in connection with holdbacks for acquisitions or similar matters, and which is not a Material Account (other than as a result of clause (iv) of the definition thereof).

"Trademark License" means any agreement, whether written or oral, providing for the grant by or to any Grantor of any right in, to or under any Trademark, including any of the foregoing referred to in Schedule 4.9 (as such schedule may be amended or supplemented from time to time). This term shall exclude implied licenses and any rights obtained or granted under a trademark pursuant to the doctrines of first sale or estoppel.

"Trademarks" means (i) all trademarks, trade names, corporate names, company names, business names, fictitious business names, trade styles, service marks, logos, designs and other source or business identifiers, and all goodwill associated therewith, now existing or hereafter adopted or acquired, all registrations and recordings thereof, and all applications in connection therewith, whether in the United States Patent and Trademark Office or in any similar office or agency of the United States, any State thereof or any other country, union of countries, or any political subdivision of any of the foregoing, or otherwise, and all common-law rights related thereto, including any of the foregoing listed in Schedule 4.9 (as such schedule may be amended or supplemented from time to time), (ii) the right to, and to obtain, all renewals thereof, (iii) the goodwill of the business symbolized by the foregoing and (iv) the right to sue for past, present and future infringements or dilution of any of the foregoing or for any injury to goodwill, and all proceeds of the foregoing, including royalties, income, payments, claims, damages and proceeds of suit.

"Trade Secret License" means any agreement, whether written or oral, providing for the grant by or to any Grantor of any right in, to or under any Trade Secret, including any of the

foregoing listed in Schedule 4.9 (as such schedule may be amended or supplemented from time to time). This term shall exclude implied licenses and any rights obtained or granted under a trade secret pursuant to the doctrine of estoppel.

“Trade Secrets” means (i) all trade secrets and all other confidential or proprietary information and know-how whether or not reduced to a writing or other tangible form, (ii) all documents and things embodying, incorporating or describing such Trade Secrets, and (iii) the right to sue for past, present and future misappropriations of any Trade Secret, and all proceeds of the foregoing, including royalties, income, payments, claims, damages and proceeds of suit.

“UCC Letter of Credit” means “Letter of Credit” (and in plural, “Letters of Credit”) as defined in the New York UCC.

“UCC Letter of Credit Rights” means “Letter-of-Credit Rights” as defined in the New York UCC.

“UETA” has the meaning assigned to such term in Section 4.3.

1.2 Other Definitional Provisions.

(a) The words “hereof,” “herein,” “hereto” and “hereunder” and similar words refer to this Agreement as a whole, and not to any particular Article, Section, subsection or clause in this Agreement.

(b) Unless otherwise expressly indicated herein, (i) references in this Agreement to an Exhibit, Schedule, Article, Section, clause or sub-clause refer to the appropriate Exhibit or Schedule to, or Article, Section, clause or sub-clause in this Agreement and (ii) the words “above” and “below”, when following a reference to a clause or a sub-clause of this Agreement, refer to a clause or sub-clause within, respectively, the same Section or clause.

(c) Where the context requires, terms relating to the Collateral or any part thereof, when used in relation to a Grantor, shall refer to the property or assets such Grantor has granted as Collateral or the relevant part thereof.

(d) [Reserved].

(e) Each agreement defined in this Section 1 shall include all appendices, exhibits and schedules thereto. References in this Agreement to such agreement shall be to such agreement as so amended, restated, supplemented or modified, unless (i) the prior written consent of the applicable Secured Parties is required under the Credit Agreement for an amendment, restatement, supplement or other modification to any such agreement and such consent is not obtained or (ii) it is otherwise specified that such reference refers to such agreement as of a particular date.

(f) References in this Agreement to any statute shall be to such statute as amended or modified, together with any successor legislation, in each case in effect at the

time any such reference is operative unless it is otherwise specified that such reference refers to such statute as of a particular date.

(g) The term "including" when used in this Agreement means "including without limitation" except when used in the computation of time periods. The phrase "in the aggregate", when used in this Agreement, means "individually or in the aggregate," unless otherwise expressly noted.

SECTION 2 [RESERVED].

SECTION 3 GRANT OF SECURITY INTEREST; CONTINUING LIABILITY UNDER COLLATERAL.

(a) Each Grantor hereby grants to the Collateral Agent, for the benefit of the Secured Parties in accordance with the Loan Documents, a security interest in such Grantor's right, title and interest in and to the following property, in each case, wherever located and whether now owned or at any time hereafter acquired by such Grantor or in which such Grantor now has or at any time in the future may acquire any right, title or interest (collectively, the "Collateral"), as security for the prompt and complete payment and performance when due (whether at the stated maturity, by acceleration or otherwise) of such Grantor's Obligations:

- (i) all Accounts;
- (ii) all As-Extracted Collateral;
- (iii) all cash and Cash Equivalents;
- (iv) all Chattel Paper;
- (v) all Collateral Accounts and all Collateral Account Funds;
- (vi) all Commercial Tort Claims, including those from time to time specifically described on Schedule 4.11;
- (vii) all Contracts;
- (viii) all Documents;
- (ix) all Equipment;
- (x) all General Intangibles, including rights under any Hedging Contract;
- (xi) all Goods;
- (xii) all Instruments;
- (xiii) all Insurance;

(xiv) all Intellectual Property;

(xv) all Inventory;

(xvi) all Investment Property (it being understood that, to the extent such Investment Property constitutes shares issued by a company incorporated in the Cayman Islands, each Grantor holding such Investment Property hereby mortgages by way of first legal mortgage its right, title and interest in such Investment Property in favor of the Collateral Agent);

(xvii) all UCC Letters of Credit and UCC Letter of Credit Rights;

(xviii) all Financial Assets;

(xix) all Deposit Accounts;

(xx) all Securities Accounts;

(xxi) all Security Entitlements;

(xxii) all books, records, ledger cards, files, correspondence, customer lists, blueprints, technical specifications, manuals, computer software, computer printouts, tapes, disks and other electronic storage media and related data processing software and similar items that at any time pertain to or evidence or contain information relating to any of the Collateral or are otherwise necessary or helpful in the collection thereof or realization thereupon; and

(xxiii) all Proceeds, goodwill, products, accessions, rents and profits of any and all of the foregoing and all collateral security, Supporting Obligations and guarantees given by any Person with respect to any of the foregoing;

provided that, notwithstanding any other provision set forth in this Section 3, this Agreement shall not, at any time, constitute a grant of a security interest in any property that is, at such time, an Excluded Asset, and the term "Collateral" and each of the defined terms incorporated therein shall exclude the Excluded Assets.

(b) Notwithstanding anything herein to the contrary, (i) each Grantor shall remain liable for all obligations under and in respect of the Collateral and nothing contained herein is intended or shall be a delegation of duties to the Collateral Agent or any other Secured Party, (ii) each Grantor shall remain liable under each of the agreements included in the Collateral, including any Receivables, any Contracts and any agreements relating to Pledged Partnership Interests or Pledged LLC Interests, to perform all of the obligations undertaken by it thereunder all in accordance with and pursuant to the terms and provisions thereof and neither the Collateral Agent nor any other Secured Party shall have any obligation or liability under any of such agreements by reason of or arising out of this Agreement or any other document related hereto nor shall the Collateral Agent nor any other Secured Party have any obligation to make any inquiry as to the nature or sufficiency of any payment received by it or have any obligation to take any action to collect or enforce

any rights under any agreement included in the Collateral, including any agreements relating to any Receivables, any Contracts or any agreements relating to Pledged Partnership Interests or Pledged LLC Interests and (iii) the exercise by the Collateral Agent of any of its rights hereunder shall not release any Grantor from any of its duties or obligations under the contracts and agreements included in the Collateral, including any agreements relating to any Receivables, any Contracts and any agreements relating to Pledged Partnership Interests or Pledged LLC Interests.

SECTION 4 REPRESENTATIONS AND WARRANTIES.

To induce the Agents, the Lenders, and the Issuers to enter into the Credit Agreement, to induce the other Secured Parties to enter into each other applicable Loan Document and to induce (i) the Lenders, Issuers and other applicable Secured Parties to make and/or maintain their respective extensions of credit thereunder and (ii) the Issuers and other applicable Secured Parties to issue and/or maintain their respective Letters of Credit thereunder, each Grantor hereby represents and warrants to the Secured Parties that:

4.1 Representations in Credit Agreement. In the case of each Grantor, the statement set forth in Section 3.3 (b)(i) of the Credit Agreement is true as it relates to such Grantor or to the Loan Documents to which such Grantor is a party, provided that any reference therein to any Borrower's knowledge shall, for the purposes of this Section 4.1 be deemed to be a reference to such Grantor's knowledge.

4.2 Title; No Other Liens. Such Grantor owns or licenses or otherwise has an interest in each item of the Collateral free and clear of any and all Liens, including Liens arising as a result of such Grantor becoming bound (as a result of merger or otherwise) as grantor under a security agreement entered into by another Person, except for Liens expressly permitted by Section 8.2 of the Credit Agreement and not prohibited by any other Loan Document. No effective financing statement, mortgage or other public notice that perfects a valid Lien with respect to all or any part of the Collateral is on file or of record in any public office, except such as have been filed in favor of the Collateral Agent pursuant to this Agreement or as are expressly permitted by the Credit Agreement.

4.3 Perfected First Priority Liens. The security interests granted pursuant to this Agreement upon entry of the Interim DIP Order and otherwise (a) upon completion of the filings and other actions specified on Schedule 4.3 (all of which, in the case of all filings and other documents referred to on Schedule 4.3, have been (or shall be) delivered to the Collateral Agent or to any other Person as the Collateral Agent may direct in duly completed and duly executed form, as applicable, and may be filed by the Collateral Agent or any of their designees at any time) and payment of all filing fees, will constitute valid fully perfected security interests in all of the Collateral in favor of the Collateral Agent, for the ratable benefit of the Secured Parties, as collateral security for such Grantor's Obligations, enforceable in accordance with the terms hereof, to the extent such security interest in such Collateral can be perfected by (i) the filing of a financing statement under (a) the Uniform Commercial Code of any jurisdiction in the United States and of any state (including the District of Columbia) thereof or (b) with respect to any Canadian Grantor, the PPSA, (ii) the filing with the United States Patent and Trademark Office or the United States Copyright Office or, to the extent applicable with respect to any Canadian Grantor and necessary

for perfection purposes under the PPSA, with the Canadian Intellectual Property Office, of an Intellectual Property Security Agreement or other filing, (iii) the possession of such Collateral under applicable Laws of the United States and of any state (including the District of Columbia) thereof or, with respect to any Canadian Grantor, of any applicable territory or province of Canada, (iv) execution and delivery by the applicable Grantor, the applicable Securities Intermediary or depositary institution, as applicable, and the Collateral Agent (or its Bailee) of an agreement granting control to the Collateral Agent (or its Bailee) over such Collateral that is a Material Account governed by the laws of the United States or any state (including the District of Columbia) thereof, or Canada or any province or territory thereof or (v) in the case of a Grantor incorporated in Ireland the delivery of a Form C1 with the Irish Companies Registration Office within the statutory prescribed timeframe, and (b) are prior to all other Liens on the Collateral, except for Liens expressly permitted by Section 8.2 of the Credit Agreement and not prohibited by any other Loan Document. Without limiting the foregoing, within the time periods and to the extent required by the Credit Agreement (including, without limitation, Section 7.14 of the Credit Agreement) or this Agreement, each Grantor has taken, or shall take, all actions necessary or desirable under (x) the applicable Laws of the United States and any state (including the District of Columbia) thereof, (y) applicable Laws as required by Section 7.14 of the Credit Agreement and (z) such other applicable Laws as reasonably requested by the Collateral Agent in accordance with the Credit Agreement or the Collateral Agency Agreement to establish (i) the Collateral Agent's (or its Bailee's) "control" (within the meanings of Sections 8-106 and 9-106 of the New York UCC or any analogous provision of the UCC or, with respect to any Canadian Grantor, the PPSA) over any Securities Accounts included in the Collateral and over any portion of the Investment Property constituting Certificated Securities, Uncertificated Securities or Security Entitlements, in each case to the extent constituting a Material Account or a "financial asset" that is credited to a Material Account, (ii) the Collateral Agent's (or its Bailee's) "control" (within the meaning of Section 9-107 of the New York UCC or any analogous provision of the UCC or, with respect to any Canadian Grantor, the PPSA) over all UCC Letter of Credit Rights, (iii) the Collateral Agent's (or its Bailee's) "control" (within the meaning of Section 9-105 of the New York UCC or any analogous provision of the UCC or, with respect to any Canadian Grantor, the PPSA) over all Electronic Chattel Paper, (iv) the Collateral Agent's (or its Bailee's) "control" (within the meaning of Section 16 of the Uniform Electronic Transaction Act (as in effect in the applicable jurisdiction, the "UETA") over all "transferable records" (as defined in UETA), (v) the Collateral Agent's (or its Bailee's) "control" (within the meaning of Section 9-104 of the New York UCC or any analogous provision of the UCC or, with respect to any Canadian Grantor, the PPSA) over all Deposit Accounts included in the Collateral to the extent constituting a Material Account.

4.4 Name; Jurisdiction of Organization, etc. On the Effective Date, such Grantor's exact legal name (as indicated on the public record of such Grantor's jurisdiction of formation or organization), jurisdiction of incorporation or organization, organizational identification and/or company registration number (if applicable), if any, and the location of such Grantor's chief executive office or sole place of business are specified on Schedule 4.4. Each Grantor is incorporated or organized solely under the law of the jurisdiction so specified and has not filed any certificates of domestication, transfer or continuance in any other jurisdiction. Except as otherwise indicated on Schedule 4.4, for each Grantor organized or formed under the laws of any political subdivision of the United States or Canada, the jurisdiction of each such Grantor's organization of formation is required to maintain a public record showing the Grantor to have been organized or formed. Except as specified on Schedule 4.4, as of the Effective Date no such Grantor

has changed its name, jurisdiction of incorporation or organization, chief executive office or sole place of business or its corporate structure in any way (e.g., by merger, consolidation, change in corporate form or otherwise) within the past five years and has not within the last five years become bound (whether as a result of merger or otherwise) as a grantor under a security agreement entered into by another Person, which has not heretofore been terminated.

4.5 Inventory.

(a) On the Effective Date, the Inventory of each Grantor (other than Inventory in transit, Inventory located outside the United States, Inventory at any job-site of any customer of such Grantor in the ordinary course of business consistent with past practices and Inventory which in the aggregate does not constitute a material portion of the Inventory included in the Collateral) is kept only at the locations listed on Schedule 4.5.

(b) Any Inventory now or hereafter produced by any Grantor included in the Collateral have been and will be produced in compliance in all material respects with the requirements of all applicable Laws, including, to the extent applicable to such Grantor, the Fair Labor Standards Act, as amended.

(c) No material portion of the Inventory included in the Collateral is in the possession of an issuer of a negotiable document (as determined by Section 7-104 of the New York UCC) therefor or is otherwise in the possession of any bailee or warehouseman.

4.6 Farm Products and Canadian Consumer Goods. None of the Collateral constitutes, or is the Proceeds of, Farm Products. No Canadian Grantor owns any Canadian Consumer Goods which are material in value or which are material to the business, operations, property, condition or prospects (financial or otherwise) of that Canadian Grantor.

4.7 Investment Property.

(a) Schedule 4.7 hereto sets forth under the headings "Pledged Stock," "Pledged LLC Interests," "Pledged Partnership Interests," "Pledged Trust Interests" and "Pledged Alternative Equity Interests," respectively, all of the Pledged Stock, Pledged LLC Interests, Pledged Partnership Interests, Pledged Trust Interests and Pledged Alternative Equity Interests owned by any Grantor as of the Effective Date, and such Pledged Equity Interests constitute the percentage of issued and outstanding shares of stock, percentage of membership interests, percentage of partnership interests or percentage of beneficial interest of the respective issuers thereof indicated on such schedule. Schedule 4.7 sets forth under the heading "Pledged Notes" all of the Pledged Notes owned by any Grantor as of the Effective Date, and, to the knowledge of such Grantor (unless the issuer thereof is an Affiliate of such Grantor) all of such Pledged Notes have been duly authorized, authenticated or issued, and delivered and are the legal, valid and binding obligation of the issuers thereof enforceable in accordance with their terms, subject to applicable bankruptcy, examinership, insolvency, reorganization, moratorium or other Laws affecting creditors' rights generally and subject to general principles of equity, regardless of whether considered in a proceeding in equity or at law, and constitute all of the issued and

outstanding inter-company indebtedness evidenced by an Instrument or Certificated Security of the respective issuers thereof owing to such Grantor.

(b) The shares of Pledged Equity Interests pledged by such Grantor hereunder constitute all of the issued and outstanding shares of all classes of Stock owned by such Grantor in each issuer thereof.

(c) The Pledged Equity Interests have been duly and validly issued and, except as set forth on Schedule 4.7 hereto (as such schedule may be supplemented in writing by any Grantor from time to time hereunder following or pursuant to a transaction that is permitted by the Credit Agreement and delivered to the Collateral Agent), are fully paid and nonassessable (to the extent applicable).

(d) Such Grantor is the record and beneficial owner of, and has good and marketable (to the extent applicable) title to, the Investment Property pledged by it hereunder, free of any and all Liens or options in favor of, or claims of, any other Person, except Liens expressly permitted by Section 8.2 of the Credit Agreement and not prohibited by any other Loan Document and except as set forth on Schedule 4.7, as of the Effective Date there are no outstanding warrants, options or other rights to purchase, or shareholder, equityholder, voting trust or similar agreements outstanding with respect to, or property that is convertible into, or that requires the issuance or sale of, any Pledged Equity Interests.

4.8 Receivables.

(a) No amount payable to such Grantor under or in connection with any Receivable that is included in the Collateral in excess of \$5,000,000 is evidenced by any Instrument or Tangible Chattel Paper which has not been delivered to the Collateral Agent (or its Bailee) or constitutes Electronic Chattel Paper that has not been subjected to the "control" (within the meaning of Section 9-105 of the New York UCC or, with respect to any Canadian Grantor, any analogous provision of the PPSA) of the Collateral Agent (or its Bailee).

(b) Each Receivable that is included in the Collateral (i) is and will be the legal, valid and binding obligation of the Account Debtor in respect thereof, representing an unsatisfied obligation of such Account Debtor, (ii) is and will be enforceable in accordance with its terms, subject to applicable bankruptcy, examinership, insolvency, reorganization, moratorium or other Laws affecting creditors' rights generally and subject to general principals of equity, regardless of whether considered in a proceeding in equity or at law, (iii) is not and will not be subject to any setoffs, defenses, taxes or counterclaims (except with respect to refunds, returns and allowances in the ordinary course of business) and (iv) is and will be in compliance with all applicable Laws except where the failure to comply with this Section 4.8(b) with respect to each Receivable could not reasonably be expected to have a Material Adverse Effect.

4.9 Intellectual Property.

(a) Schedule 4.9 lists all Copyrights, Patents, and Trademarks which are registered with the U.S. Patent and Trademark Office or the U.S. Copyright Office or, to

the extent applicable with respect to any Canadian Grantor and necessary to perfect Intellectual Property under the PPSA, with the Canadian Intellectual Property Office, or are the subject of an application for registration with any such Governmental Authority, in each case which is owned by such Grantor in its own name on the Effective Date (collectively, the "Owned Intellectual Property"). Except as set forth in Schedule 4.9, or, following a transaction not prohibited by the Credit Agreement, as such schedule may be updated in writing from time to time by any Grantor, such Grantor is the exclusive owner of the entire and unencumbered right, title and interest in and to all material Owned Intellectual Property and is otherwise entitled to grant to others the right to use (and, where applicable, itself use) all such material Owned Intellectual Property. Such Grantor has a valid and enforceable right to use all Intellectual Property used by, or licensed to others by, such Grantor which is not Owned Intellectual Property (collectively, the "Licensed Intellectual Property"), in each case, which is material to such Grantor's business, pursuant to one of the written material Copyright Licenses, Patent Licenses, Trademark Licenses, and/or Trade Secret Licenses listed on Schedule 4.9 and subject to the terms thereof.

(b) On the Effective Date, all Owned Intellectual Property and all Licensed Intellectual Property, in each case, which is material to such Grantor's business (collectively, the "Material Intellectual Property"), is valid, subsisting, unexpired and enforceable and has not been abandoned. The operation of such Grantor's business as currently conducted or as contemplated to be conducted does not infringe, constitute a misappropriation of, dilute, or otherwise violate the Intellectual Property of any other Person where the same could reasonably be expected to have a Material Adverse Effect.

(c) No claim has been asserted in writing to the applicable Grantor that the use of the Material Intellectual Property does or may infringe upon or constitute a misappropriation of the rights of any other Person in any manner that could reasonably be expected to result in the loss of use, in whole or in part, of such Material Intellectual Property that could reasonably be expected to result in a Material Adverse Effect.

(d) To such Grantor's knowledge, no decision or judgment has been rendered by any Governmental Authority or arbitrator in the United States or outside the United States which would materially limit or cancel the validity or enforceability of, or such Grantor's rights in, any Material Intellectual Property. Such Grantor is not aware of any uses of any item of Material Intellectual Property that could reasonably be expected to lead to such item becoming invalid or unenforceable partially in any material respect or in full, including unauthorized trademark uses by third parties and uses which were not supported by the goodwill of the business connected with Trademarks and Trademark Licenses.

(e) No action or proceeding is pending for which the applicable Grantor has notice in writing, or, to such Grantor's knowledge, threatened, on the Effective Date (i) seeking to limit, cancel or invalidate any Owned Intellectual Property, (ii) alleging that any services provided by, processes used by, or products manufactured or sold by such Grantor infringe any patent, trademark, copyright, or misappropriate any trade secret or violate any other right of any other Person, or (iii) alleging that any Material Intellectual Property is being licensed or sublicensed in violation of any intellectual property or any other right of any other Person, in each case, which, if adversely determined, could reasonably be

expected to have a Material Adverse Effect. To such Grantor's knowledge, no Person is engaging in any activity that infringes upon or misappropriates, or is otherwise an unauthorized use of, any Material Intellectual Property, in any case that could reasonably be expected to result in a Material Adverse Effect. The consummation of the transactions contemplated by this Agreement will not result in the termination of any of the Material Intellectual Property.

(f) With respect to each Copyright License, Trademark License, Trade Secret License and Patent License which license constitutes Material Intellectual Property or the loss of which could otherwise have a Material Adverse Effect: (i) such license is binding and enforceable against the other party thereto; (ii) such license will not cease to be valid and binding and in full force and effect on terms identical to those currently in effect as a result of the rights and interests granted herein (including, but not limited to, the enforceability of such rights and interests with respect to each such license), nor will the grant of such rights and interests (or the enforceability thereof) constitute a breach or default under such license or otherwise give the licensor or licensee a right to terminate such license; (iii) such Grantor has not received any notice of termination or cancellation under such license; (iv) such Grantor has not received any notice of a breach or default under such license, which breach or default has not been cured; and (v) such Grantor is not in breach or default in any material respect, and no event has occurred that, with notice and/or lapse of time, would constitute such a breach or default or permit termination, modification or acceleration under such license.

(g) Except as set forth on Schedule 4.9, such Grantor has made all filings and recordings and paid all required fees and taxes to maintain each and every item of registered Material Intellectual Property in full force and effect and to protect and maintain its interest therein.

(h) To the knowledge of such Grantor, (i) none of the Trade Secrets that constitute Material Intellectual Property have been used, divulged, disclosed or appropriated to the detriment of such Grantor for the benefit of any other Person without permission of such Grantor; and (ii) no employee, independent contractor or agent of such Grantor has misappropriated any Trade Secrets of any other Person in the course of the performance of his or her duties as an employee, independent contractor or agent of such Grantor where the same could reasonably be expected to have a Material Adverse Effect.

(i) Such Grantor has taken commercially reasonable steps to exercise quality control over any licensee of such Grantor's Trademarks.

4.10 UCC Letters of Credit and UCC Letter of Credit Rights. With respect to any UCC Letters of Credit that are by their terms transferable, each Grantor will, upon receipt of a written request from the Collateral Agent, use commercially reasonable efforts to cause all issuers and nominated Persons under UCC Letters of Credit in which the Grantor is the beneficiary or assignee to (a) consent to the assignment of such UCC Letter of Credit to the Collateral Agent and (b) agree that, upon receipt of written notice received from the Collateral Agent that an Event of Default has occurred and so long as such Event of Default is continuing (without further order from the Bankruptcy Court), it shall cause all payments thereunder to be made to the Collateral Account.

With respect to any UCC Letters of Credit that are not transferable, each Grantor shall, upon receipt of a written request from the Collateral Agent, use commercially reasonable efforts to obtain the consent of the issuer thereof and any nominated Person thereon to the assignment of the proceeds of such released UCC Letter of Credit to the Collateral Agent in accordance with Section 5-114(c) of the New York UCC or, to the extent applicable with respect to any Canadian Grantor, any analogous provision of the PPSA.

4.11 Commercial Tort Claims. As of the Effective Date, Schedule 4.11 hereto sets forth all Commercial Tort Claims of each Grantor for which a complaint in a court of competent jurisdiction has been filed and that, to each such Grantor's knowledge, has a value, individually or in the aggregate, in excess of \$10,000,000.

4.12 Contracts. No amount payable to such Grantor under or in connection with any Contract that is included in the Collateral which has a value in excess of \$5,000,000 individually or \$15,000,000 in the aggregate is evidenced by any Instrument or Tangible Chattel Paper which has not been delivered or which is not in the process of being delivered in compliance with Section 5 hereof to the Collateral Agent (or its Bailee) or constitutes Electronic Chattel Paper that is not under the "control" (within the meaning of Section 9-105 of the New York UCC or, to the extent applicable with respect to any Canadian Grantor, any analogous provision of the PPSA) of the Collateral Agent (or its Bailee) in accordance with Section 5.2(b) or in the process of becoming under the "control" (within the meaning of Section 9-105 of the New York UCC) of the Collateral Agent (or its Bailee) in accordance with Section 5.2(b). Notwithstanding any representation, warranty, covenant or other provision contained herein to the contrary, the failure of any Grantor to deliver to the Collateral Agent (or its Bailee) the original Certificated Securities, Instruments and Tangible Chattel Paper described on Schedule 4.12 shall not constitute a breach, Default or Event of Default hereunder.

4.13 Deposit Accounts; Securities Accounts. Set forth on Schedule 4.13, as of the Effective Date is a description of all Material Accounts (other than with respect to Material Accounts pursuant to clause (iv)(A) of the definition of Material Account) of the Grantors, including the name of (A) the applicable Grantor, (B) in the case of a Deposit Account, the depository institution, (C) in the case of a Securities Account, the Securities Intermediary or issuer, as applicable and (D) the jurisdiction where such account is located.

SECTION 5 COVENANTS.

Each Grantor covenants and agrees with the Secured Parties, that, as of the Effective Date and until the termination of this Agreement in accordance with its terms:

5.1 Covenants in Credit Agreement.

Each Grantor shall take, or shall refrain from taking, as the case may be, each action that is within its control and is necessary to be taken or not taken, as the case may be, so that no Default or Event of Default is caused by the failure to take such action or to refrain from taking such action by such Grantor or any of its Subsidiaries.

5.2 Delivery and Control of Instruments, Chattel Paper, Negotiable Documents and Investment Property.

(a) If any of the Collateral having a value in excess of \$5,000,000 individually or \$15,000,000 in the aggregate is or shall become evidenced or represented by any Instrument, Certificated Security, Negotiable Document or Tangible Chattel Paper, such Instrument (other than checks received in the ordinary course of business), Certificated Security, Negotiable Documents or Tangible Chattel Paper shall be promptly delivered to the Collateral Agent (or its Bailee), duly endorsed in a manner reasonably satisfactory to the Collateral Agent, to be held as Collateral pursuant to this Agreement. Without limiting the generality of the foregoing, all of such property owned by any Grantor as of the Effective Date and represented in such form shall be delivered on or before the Effective Date.

(b) If any of the Collateral having a value in excess of \$5,000,000 individually or \$15,000,000 in the aggregate is or shall become Electronic Chattel Paper such Grantor shall ensure that (i) a single authoritative copy shall exist which is unique, identifiable, unalterable (except as provided in clauses (iii), (iv) and (v) of this paragraph), (ii) such authoritative copy identifies the Collateral Agent (or its Bailee) as the assignee and is communicated to and maintained by the Collateral Agent or its designee, (iii) copies or revisions that add or change the assignee of the authoritative copy can only be made with the participation of the Collateral Agent, (iv) each copy of the authoritative copy and any copy of a copy is readily identifiable as a copy and not the authoritative copy and (v) any revision of the authoritative copy is readily identifiable as an authorized or unauthorized revision.

(c) If any Collateral having a value in excess of \$5,000,000 individually or \$15,000,000 in the aggregate is or shall become an Uncertificated Security, such Grantor shall cause the issuer thereof, if such issuer is a Subsidiary of the Parent, either (i) to register the Collateral Agent as the registered owner of such Uncertificated Security, upon original issue or registration of transfer or (ii) to agree in writing with such Grantor and the Collateral Agent that such issuer will comply with instructions with respect to such Uncertificated Security originated by the Collateral Agent without further consent of such Grantor, such agreement to be in substantially the form of Exhibit A, and such actions shall be taken on or prior to the Effective Date with respect to any such Uncertificated Securities owned as of the Effective Date by any Grantor.

(d) If any of the Collateral is or shall become evidenced or represented by a Commodity Contract having a value in excess of \$5,000,000 individually or \$15,000,000 in the aggregate, such Grantor shall, upon receipt of written request from the Collateral Agent, cause the Commodity Intermediary with respect to such Commodity Contract to agree in writing with such Grantor and the Collateral Agent that such Commodity Intermediary will apply any value distributed on account of such Commodity Contract as directed by the Collateral Agent without further consent of such Grantor, such agreement to be in form and substance reasonably satisfactory to the Collateral Agent.

(e) In addition to and not in lieu of the foregoing, if any issuer of any Investment Property is a Mortgaged Vessel Owning Subsidiary of the Parent and is incorporated or organized under the law of, or has its chief executive office in, a jurisdiction outside of the United States, each Grantor shall take such additional actions, including causing such

issuer to register the pledge on its books and records, as may be reasonably requested by the Collateral Agent, and without further order of Bankruptcy Court, under the laws of such jurisdiction to insure the validity, perfection and priority of the security interest of the Collateral Agent. Notwithstanding anything herein to the contrary, each interest in any limited liability company or limited partnership that is a Subsidiary (other than any such Subsidiary that is incorporated or organized under the law of, or has its chief executive office in, a jurisdiction outside of the United States or Canada) and pledged hereunder shall either (a) be represented by a certificate, shall be a "security" within the meaning of Article 8 of the New York UCC and shall be governed by Article 8 of the New York UCC, or (b) not be represented by a certificate, in which case, no Grantor shall take any action to cause such interest to be or become a "security" within the meaning of, or to be governed by, Article 8 of the UCC as in effect under the laws of any state having jurisdiction and shall not cause or permit any such limited liability company or limited partnership to "opt in" or to take any other action seeking to establish any interest in such limited liability company or limited partnership comprising the Collateral as a "security" or to become certificated, in each case, without promptly delivering all certificates evidencing such interest to the Collateral Agent (or its Bailee) in accordance with Section 5.2(a).

(f) In the case of any transferable UCC Letters of Credit in excess of \$5,000,000 individually or \$15,000,000 in the aggregate, each Grantor shall use commercially reasonable efforts to obtain the consent of any issuer thereof to the transfer of such UCC Letters of Credit to the Collateral Agent (or its Bailee). In the case of any other UCC Letter of Credit Rights in excess of \$5,000,000 individually or \$15,000,000 in the aggregate, each Grantor shall use commercially reasonable efforts to obtain the consent of the issuer thereof and any nominated Person thereon to the assignment of the proceeds of the related UCC Letter of Credit in accordance with Section 5-114(c) of the New York UCC.

5.3 Maintenance of Insurance.

(a) Such Grantor will maintain insurance in accordance with Section 7.5 of the Credit Agreement, and furnish to the Collateral Agent, upon written request, with a copy of such insurance policies.

(b) Such Grantor will deliver to the Collateral Agent on behalf of the Secured Parties, (i) on the Effective Date, a certificate dated as of a recent date showing the amount and types of insurance coverage as of such date, (ii) upon reasonable request of the Collateral Agent from time to time, reasonably detailed information as to the insurance carried, (iii) promptly following receipt of notice from any insurer, a copy of any notice of cancellation or material change in coverage from that existing on the Effective Date and (iv) forthwith, notice of any cancellation or nonrenewal of coverage by such Grantor. To the extent applicable, the Collateral Agent shall be named as additional insured on all such liability insurance policies of such Grantor and the Collateral Agent (or its Bailee) shall be named as lender's loss payee or loss payee on all property and casualty insurance policies of such Grantor.

5.4 Payment of Obligations.

Such Grantor shall pay and discharge or otherwise satisfy at or before maturity or before they become delinquent, as the case may be, all taxes, assessments and governmental charges or levies imposed upon the Collateral or in respect of income or profits therefrom, as well as all claims of any kind (including claims for labor, materials and supplies) against or with respect to the Collateral, except that no such tax, assessment or charge need be paid if (i) the amount or validity thereof is currently being contested in good faith by appropriate proceedings, reserves in conformity with GAAP with respect thereto have been provided on the books of such Grantor and such proceedings could not reasonably be expected to result in the sale, forfeiture or loss of any material portion of the Collateral or any interest therein, or (ii) the failure to so pay and discharge would not, in the aggregate, reasonably be expected to have a Material Adverse Effect.

5.5 Maintenance of Perfected Security Interest; Further Documentation.

(a) Except as otherwise expressly permitted by the Credit Agreement and the Collateral Agency Agreement, such Grantor shall maintain each of the security interests created by this Agreement as a perfected security interest under (x) applicable Laws of the United States and of any state thereof or, with respect to any Canadian Grantor, Canada or any province or territory thereof, (y) applicable Laws as required by Section 7.14 of the Credit Agreement and (z) other applicable Laws to the extent otherwise required by the Collateral Agent in accordance with any Loan Documents having at least the priority described in Section 4.3 and shall defend such security interest against any claims and demands of any Persons (other than the Secured Parties), subject to the provisions of Section 8.15.

(b) Such Grantor shall furnish to the Collateral Agent from time to time statements and schedules further identifying and describing the Collateral and such other reports in connection with the assets and property of such Grantor as the Collateral Agent may reasonably request, all in reasonable detail.

(c) At any time and from time to time, upon the written request of the Collateral Agent, and at the sole expense of such Grantor, such Grantor shall promptly and duly authorize, execute and deliver, and have recorded, such further instruments and documents and take such further actions as the Collateral Agent may reasonably request to be taken, whether in the United States or outside the United States, for the purpose of obtaining or preserving the full benefits of this Agreement and of the rights and powers herein granted, including, the filing of any financing or continuation statements under the UCC (or other similar Laws) in effect in any jurisdiction within or without the United States with respect to the security interests created hereby and in the case of Investment Property and any other relevant Collateral, taking any actions necessary to enable the Collateral Agent (or its Bailee) to obtain "control" (within the meaning of the UCC) with respect thereto in accordance with the other terms of this Agreement and the other Loan Documents.

5.6 Changes in Locations, Name, Jurisdiction of Incorporation, etc. Such Grantor shall not, except upon at least 10 days' prior written notice (or such shorter period consented to by the Collateral Agent in writing) to the Collateral Agent and delivery to the Collateral Agent of duly

authorized and, where required, executed copies of all additional financing statements and other documents reasonably requested by the Collateral Agent to maintain the validity, perfection and priority of the security interests provided for herein:

(a) change its legal name, jurisdiction of incorporation or organization or the location of its chief executive office or sole place of business from that referred to in Section 4.4; or

(b) change its legal name, identity or structure to such an extent that any financing statement filed by the Collateral Agent in connection with this Agreement would become misleading.

5.7 Notices. Such Grantor shall advise the Collateral Agent promptly, in reasonable detail, of:

(a) any Lien on any of the Collateral (other than any Lien expressly permitted by Section 8.2 of the Credit Agreement) which would adversely affect the ability of the Collateral Agent to exercise any of its remedies hereunder; and

(b) the occurrence of any other event of which such Grantor becomes aware that could reasonably be expected to have a Material Adverse Effect or a material adverse effect upon the aggregate value of the Collateral or on the security interests created hereby.

5.8 Investment Property.

(a) If such Grantor shall become entitled to receive or shall receive any stock or other ownership certificate (including any certificate representing a stock dividend or a distribution in connection with any reclassification, increase or reduction of capital or any certificate issued in connection with any reorganization), option or rights in respect of Pledged Equity Interests in any issuer thereof, whether in addition to, in substitution of, as a conversion of, or in exchange for, any shares of or other ownership interests in the Pledged Securities, or otherwise in respect thereof, such Grantor shall accept the same as the agent of the Secured Parties, hold the same in trust for the Secured Parties and promptly deliver the same to the Collateral Agent (or its Bailee) in the exact form received, duly endorsed by such Grantor to the Collateral Agent (or its Bailee), if required, together with an undated stock power or similar instrument of transfer covering such certificate duly executed in blank by such Grantor and with, if the Collateral Agent so requests, signature guaranteed, to be held by the Collateral Agent (or its Bailee), subject to the terms hereof, as additional collateral security for the Obligations. Any sums paid upon or in respect of the Pledged Securities upon the liquidation or dissolution of any issuer thereof shall be paid over to the Collateral Agent (or its Bailee) to be held by it hereunder as additional collateral security for the Obligations if an Event of Default then exists (without further order from the Bankruptcy Court), and in case any distribution of capital shall be made on or in respect of the Pledged Securities or any property shall be distributed upon or with respect to the Pledged Securities pursuant to the recapitalization or reclassification of the capital of any issuer thereof or pursuant to the reorganization thereof, the property so distributed shall, if an Event of Default then exists (without further order from the Bankruptcy Court), and

unless otherwise subject to a perfected security interest in favor of the Collateral Agent, be delivered to the Collateral Agent (or its Bailee) to be held by it hereunder as additional collateral security for the Obligations. If any sums of money or property so paid or distributed in respect of the Pledged Securities shall be received by such Grantor in violation of the immediately preceding sentence, such Grantor shall, until such money or property is paid or delivered to the Collateral Agent (or its Bailee), hold such money or property in trust for the Secured Parties, segregated from other funds of such Grantor, as additional collateral security for the Obligations.

(b) Without the prior written consent of the Collateral Agent, such Grantor shall not (i) vote to enable, or take any other action to permit, any Subsidiary of the Parent that is an issuer of Pledged Securities to issue any stock, partnership interests, limited liability company interests or other equity securities of any nature or to issue any other securities convertible into or granting the right to purchase or exchange for any stock, partnership interests, limited liability company interests or other equity securities of any nature of any such issuer (except, in each case, pursuant to a transaction expressly permitted by the Credit Agreement and the other Loan Documents, if applicable), (ii) sell, assign, transfer, exchange, or otherwise dispose of, or grant any option with respect to, any of the Investment Property or Proceeds thereof or any interest therein (except, in each case, pursuant to a transaction expressly permitted by the Credit Agreement and the other Loan Documents, if applicable), (iii) create, incur or permit to exist any Lien or option in favor of, or any claim of any Person with respect to, any of the Investment Property or Proceeds thereof, or any interest therein, except for the security interests created by this Agreement or any Lien expressly permitted thereon pursuant to Section 8.2 of the Credit Agreement and the other Loan Documents, if applicable, (iv) enter into any agreement or undertaking restricting the right or ability of such Grantor or the Collateral Agent to sell, assign or transfer any of the Investment Property or Proceeds thereof or any interest therein or (v) without the prior written consent of the Collateral Agent, cause or permit any Subsidiary of the Parent that is an issuer of any Pledged Partnership Interests or Pledged LLC Interests which are not securities (for purposes of the New York UCC) on the Effective Date to elect or otherwise take any action to cause such Pledged Partnership Interests, Pledged LLC Interests to be treated as securities for purposes of the New York UCC; provided, however, notwithstanding the foregoing, if any issuer of any Pledged Partnership Interests or Pledged LLC Interests takes any such action in violation of the provisions in this clause (v) or any non-Subsidiary of the Parent that is an issuer takes any of the foregoing actions, such Grantor shall promptly notify the Collateral Agent in writing of any such election or action and, in such event, shall take all steps necessary or advisable to establish the Collateral Agent's (or its Bailee's) "control" thereof.

(c) In the case of each Grantor which is an issuer of Pledged Securities, such Grantor agrees that (i) it shall be bound by the terms of this Agreement relating to the Pledged Securities issued by it and shall comply with such terms insofar as such terms are applicable to it, (ii) it shall notify the Collateral Agent promptly in writing of the occurrence of any of the events described in Section 5.8(a) with respect to the Pledged Securities issued by it and (iii) the terms of Sections 6.3(c) and 6.7 shall apply to it, mutatis mutandis, with respect to all actions that may be required of it pursuant to Section 6.3(c) or 6.7 with respect to the Pledged Securities issued by it. In addition, each Grantor which is either an issuer

or an owner of any Pledged Security hereby consents to the grant by each other Grantor of the security interest hereunder in favor of the Collateral Agent and to the transfer of any Pledged Security to the Collateral Agent (or its Bailee) or its nominee following the occurrence and during the continuance of an Event of Default (without further order from the Bankruptcy Court) and to the substitution of the Collateral Agent (or its Bailee) or its nominee as a partner, member, shareholder or other equityholder of the issuer of the related Pledged Security.

5.9 Receivables. Other than in the ordinary course of business, such Grantor shall not, with respect to Receivables that constitute Collateral (i) grant any extension of the time of payment of any Receivable, (ii) compromise or settle any Receivable for less than the full amount thereof, (iii) release, wholly or partially, any Person liable for the payment of any Receivable, (iv) allow any credit or discount whatsoever on any Receivable or (v) amend, supplement or modify any Receivable in any manner that could adversely affect the value thereof.

5.10 Intellectual Property.

(a) Such Grantor (either itself or through licensees) shall, in the exercise of its reasonable business judgment, taking into account the Secured Parties' interests under this Agreement, (i) continue to use each owned Trademark material to its business, (ii) maintain commercially reasonable quality of products and services offered under such Trademarks and take all necessary steps to ensure that all licensed users of such Trademarks comply with such Grantor's quality control requirements and maintain reasonable quality, (iii) not adopt or use any mark which is confusingly similar or a colorable imitation of such Trademarks unless the Collateral Agent, for the ratable benefit of the Secured Parties, shall obtain a perfected security interest in such mark pursuant to this Agreement and the Intellectual Property Security Agreement, and (iv) not (and not permit any licensee or sublicensee thereof to) do any act or knowingly omit to do any act whereby such Trademark may become invalidated or impaired in any way.

(b) Such Grantor (either itself or through licensees), subject to the exercise of its reasonable business judgment, taking into account the Secured Parties' interests under this Agreement, shall not do any act, or omit to do any act, whereby any Patent owned by such Grantor material to its business may become forfeited, abandoned or dedicated to the public.

(c) Such Grantor (either itself or through licensees), subject to the exercise of its reasonable business judgment, taking into account the Secured Parties' interests under this Agreement, shall not (and shall not permit any licensee or sublicensee thereof to) do any act or knowingly omit to do any act whereby any material portion of Copyrights owned by such Grantor and material to its business may become invalidated or otherwise impaired. Such Grantor shall not (either itself or through licensees) do any act whereby any material portion of such Copyrights may fall into the public domain.

(d) Such Grantor shall notify the Collateral Agent promptly if it knows or suspects that any application or registration relating to any Material Intellectual Property owned by a Grantor may become forfeited, abandoned or dedicated to the public, or of any

adverse determination (including the institution of, or any such determination in, any proceeding in the United States Patent and Trademark Office, the United States Copyright Office, the Canadian Intellectual Property Office or any court or tribunal in any country) regarding such Grantor's ownership of, or the validity of, any such Material Intellectual Property or such Grantor's right to register the same or to own and maintain the same.

(e) Upon request of the Collateral Agent, such Grantor shall execute and deliver, and have recorded in the United States Patent and Trademark Office, the United States Copyright Office, or the Canadian Intellectual Property Office, as applicable, any and all agreements, instruments, documents, and papers as the Collateral Agent may request to evidence the Collateral Agent's security interest in any Copyright, Patent, Trademark or other Intellectual Property of such Grantor.

(f) Such Grantor, subject to the exercise of its reasonable business judgment, taking into account the Secured Parties' interests under this Agreement, shall take reasonable and necessary steps, including in any proceeding before the United States Patent and Trademark Office, the United States Copyright Office, or the Canadian Intellectual Property Office, as applicable, to maintain and pursue each application (and to obtain the relevant registration) and to maintain each registration of Material Intellectual Property, including the payment of required fees and taxes, the filing of responses to office actions issued by the United States Patent and Trademark Office, the United States Copyright Office, and the Canadian Intellectual Property Office, as applicable, the filing of applications for renewal or extension, the filing of affidavits of use and affidavits of incontestability, the filing of divisional, continuation, continuation-in-part, reissue and renewal applications or extensions, the payment of maintenance fees, and the participation in interference, reexamination, opposition, cancellation, infringement and misappropriation proceedings.

(g) Such Grantor (either itself or through licensees), subject to the exercise of its reasonable business judgment, taking into account the Secured Parties' interests under this Agreement, shall not, without the prior written consent of the Collateral Agent, discontinue use of or otherwise abandon any of its registered Owned Intellectual Property, or abandon any application or any right to file an application for any patent, trademark, or copyright, unless such Grantor shall have previously determined that such use or the pursuit or maintenance of such Intellectual Property is no longer desirable in the conduct of such Grantor's business and that the loss thereof could not reasonably be expected to have a Material Adverse Effect.

(h) In the event that any Material Intellectual Property is infringed, misappropriated or diluted by a third party, such Grantor shall (i) take such actions as such Grantor shall reasonably deem appropriate under the circumstances to protect such Intellectual Property and (ii) promptly notify the Collateral Agent after it learns thereof and sue for infringement, misappropriation or dilution, to seek injunctive relief where appropriate and to recover any and all damages for such infringement, misappropriation or dilution.

(i) Such Grantor agrees that, should it obtain an ownership interest in any item of intellectual property which is not, as of the Effective Date, a part of the Collateral (the "After-Acquired Intellectual Property"), (i) the provisions of Section 3 shall automatically apply thereto and (ii) any such After-Acquired Intellectual Property, and in the case of trademarks, the goodwill of the business connected therewith or symbolized thereby, shall automatically become part of the Collateral.

(j) Such Grantor shall furnish to the Collateral Agent from time to time upon the Collateral Agent's reasonable request therefor reasonably detailed statements and amended schedules further identifying and describing the Owned Intellectual Property and Licensed Intellectual Property and such other materials evidencing, or reports pertaining to, the Owned Intellectual Property and Licensed Intellectual Property as the Collateral Agent may from time to time reasonably request.

5.11 Contracts.

(a) Such Grantor shall perform and comply in all material respects with all its obligations under the Contracts that constitute Collateral, except where the failure to so perform and comply could not reasonably be expected to have a Material Adverse Effect.

(b) Such Grantor shall not amend, modify, terminate, waive or fail to enforce any provision of any Contract that constitutes Collateral in any manner which could reasonably be expected to have a Material Adverse Effect.

(c) Such Grantor shall exercise promptly and diligently each and every material right which it may have under each Material Contract that constitutes Collateral (other than any right of termination), except where the failure to so exercise could not reasonably be expected to have a Material Adverse Effect.

(d) Such Grantor shall not permit to become effective in any document creating, governing or providing for any permit, lease, license or Material Contract that constitutes Collateral, a provision that would limit the creation, perfection or scope of, or exercise or enforcement of remedies in connection with, a Lien on such permit, lease, license or Material Contract in favor of the Collateral Agent for the ratable benefit of the Secured Parties unless such Grantor believes, in its reasonable judgment, that such prohibition is usual and customary in transactions of such type.

5.12 Commercial Tort Claims. Such Grantor shall advise the Collateral Agent promptly after such Grantor becomes aware of any Commercial Tort Claim for which a complaint in a court of competent jurisdiction has been filed held by such Grantor individually or in the aggregate in excess of \$10,000,000 and shall promptly following the date such complaint was filed execute and deliver to the Collateral Agent a supplement to Schedule 4.11 in form and substance reasonably satisfactory to the Collateral Agent listing such Commercial Tort Claim, which supplement shall take effect without further action on the part of any party hereto or beneficiary hereof and shall make such Commercial Tort Claim collateral security subject to this Agreement.

5.13 Deposit Accounts. For each Deposit Account that is a Material Account, such Grantor shall (a) if such Grantor opens a Deposit Account that is reasonably expected to be (or at

any time becomes or replaces) a Material Account, promptly notify the Collateral Agent thereof and (b) subject to any time periods set forth in the Credit Agreement, including Schedule 7.14 thereof, pursuant to an agreement in form and substance reasonably satisfactory to the Collateral Agent, use commercially reasonable efforts to cause the depository bank to comply at any time with instructions from the Collateral Agent (or its Bailee) to such depository bank directing the disposition of funds from time to time credited to such Deposit Account, without further consent of such Grantor. The Collateral Agent agrees not to provide any such depository bank any such instructions unless an Event of Default has occurred and is continuing.

5.14 Financial Assets. If any Securities, whether certificated or uncertificated, or other Investment Property now or hereafter acquired by any Grantor are held by such Grantor or its nominee through a Securities Intermediary in a Securities Account that is a Material Account, such Grantor shall (a) if such Grantor opens a Securities Account that is reasonably expected to be (or at any time becomes) a Material Account, promptly notify the Collateral Agent thereof and (b) subject to any time periods set forth in the Credit Agreement, including Schedule 7.14 thereof, pursuant to an agreement in form and substance satisfactory to the Collateral Agent use commercially reasonable efforts to cause such Securities Intermediary to agree to comply with entitlement orders or other instructions from the Collateral Agent (or its Bailee) to such Securities Intermediary as to such Securities or other Investment Property without further consent of such Grantor. The Collateral Agent agrees not to provide any such Securities Intermediary any such entitlement orders or other instructions unless an Event of Default has occurred and is continuing.

SECTION 6 REMEDIAL PROVISIONS.

6.1 Certain Matters Relating to Receivables.

(a) The Collateral Agent shall have the right (but shall in no way be obligated), at its own expense if an Event of Default does not then exist, to make test verifications of the Receivables that are included in the Collateral in any manner and through any medium that it reasonably considers advisable, and each Grantor shall furnish all such assistance and information as the Collateral Agent may reasonably require in connection with such test verifications.

(b) Each Grantor hereby agrees to use its commercially reasonable efforts to continue to collect all amounts due or to become due to such Grantor under the Receivables and any Supporting Obligation and diligently exercise each material right it may have under any Receivable and any Supporting Obligation, in each case, at its own expense. If required by the Collateral Agent at any time after the occurrence and during the continuance of an Event of Default (without further order from the Bankruptcy Court), any payments of Receivables, when collected by any Grantor, (i) shall be promptly (and, in any event, within two Business Days) deposited by such Grantor in the exact form received, duly endorsed by such Grantor to the Collateral Agent if required, in a Collateral Account maintained under the sole dominion and control of the Collateral Agent, subject to withdrawal by the Collateral Agent for the account of the Secured Parties only as provided in Section 6.5, and (ii) until so turned over, shall be held by such Grantor in trust for the Secured Parties, segregated from other funds of such Grantor. Each such deposit of

Proceeds of Receivables shall be accompanied by a report identifying in reasonable detail the nature and source of the payments included in the deposit.

(c) At the Collateral Agent's request but subject to the confidentiality provisions set forth in the Credit Agreement, during the continuance of an Event of Default (without further order from the Bankruptcy Court) each Grantor shall make available to the Collateral Agent original and other documents evidencing, and relating to, the agreements and transactions which gave rise to the Receivables that are included in the Collateral, including original orders, invoices and shipping receipts.

6.2 Communications with Obligors; Grantors Remain Liable.

(a) The Collateral Agent in its own name or in the name of others may at any time after the occurrence and during the continuance of an Event of Default (without further order from the Bankruptcy Court) communicate with obligors under the Receivables and parties to the Contracts to verify with them to the Collateral Agent's satisfaction the existence, amount and terms of any Receivables or Contracts that constitute Collateral.

(b) The Collateral Agent may at any time after the occurrence and during the continuance of an Event of Default (without further order from the Bankruptcy Court) notify, or require any Grantor to so notify, the Account Debtor or counterparty on any Receivable or Contract that constitutes Collateral of the security interest of the Collateral Agent therein. In addition, after the occurrence and during the continuance of an Event of Default (without further order from the Bankruptcy Court), the Collateral Agent may upon written notice to the applicable Grantor, notify, or require any Grantor to notify, the Account Debtor or counterparty to make all payments under such Receivables and Contracts directly to the Collateral Agent.

(c) Anything herein to the contrary notwithstanding, each Grantor shall remain liable under each of the Receivables and Contracts that constitutes Collateral to observe and perform all the conditions and obligations to be observed and performed by it thereunder, all in accordance with the terms of any agreement giving rise thereto. No Secured Party shall have any obligation or liability under any Receivable (or any agreement giving rise thereto) or Contract by reason of or arising out of this Agreement or the receipt by any Secured Party of any payment relating thereto, nor shall any Secured Party be obligated in any manner to perform any of the obligations of any Grantor under or pursuant to any Receivable (or any agreement giving rise thereto) or Contract, to make any payment, to make any inquiry as to the nature or the sufficiency of any payment received by it or as to the sufficiency of any performance by any party thereunder, to present or file any claim, to take any action to enforce any performance or to collect the payment of any amounts which may have been assigned to it or to which it may be entitled at any time or times.

6.3 Pledged Securities.

(a) Unless an Event of Default has occurred and is continuing and the Collateral Agent shall have given notice to the relevant Grantor of the Collateral Agent's intent to exercise its corresponding rights pursuant to Section 6.3(b), each Grantor shall be permitted

to receive all cash dividends paid in respect of the Pledged Equity Interests and all payments made in respect of the Pledged Notes, to the extent not prohibited by the Credit Agreement and the other Loan Documents, if applicable, and to exercise all voting and corporate and other ownership (or other similar) rights with respect to the Pledged Securities; provided, however, that no vote shall be cast or corporate or other ownership right exercised or other action taken which would materially impair the Collateral or which would be inconsistent with or result in any violation of any provision of the Credit Agreement, the Collateral Agency Agreement, this Agreement or any other Loan Document, if applicable.

(b) If an Event of Default shall occur and be continuing (without further order from the Bankruptcy Court) and the Collateral Agent shall have given notice to the relevant Grantor of the Collateral Agent's intent to exercise its rights pursuant to this Section 6.3(b): (i) all rights of each Grantor to exercise or refrain from exercising the voting and other consensual rights which it would otherwise be entitled to exercise pursuant hereto shall cease and all such rights shall thereupon become vested in the Collateral Agent who shall thereupon have the sole right, but shall be under no obligation, to exercise or refrain from exercising such voting and other consensual rights; (ii) the Collateral Agent shall have the right, without notice to any Grantor (where permitted by applicable Laws), any such notice being expressly waived by each Grantor, to transfer all or any portion of the Investment Property to its name or the name of its nominee or agent; and (iii) the Collateral Agent shall have the right, without notice to any Grantor, to exchange any certificates or instruments representing any Investment Property for certificates or instruments of smaller or larger denominations. In order to permit the Collateral Agent to exercise the voting and other consensual rights which it may be entitled to exercise pursuant hereto and to receive all dividends and other distributions which it may be entitled to receive hereunder each Grantor shall promptly execute and deliver (or cause to be executed and delivered) to the Collateral Agent all proxies, dividend payment orders and other instruments as the Collateral Agent may from time to time reasonably request and each Grantor acknowledges that the Collateral Agent may utilize the power of attorney set forth herein.

(c) Each Grantor hereby authorizes and instructs each issuer of any Pledged Securities pledged by such Grantor hereunder to (i) comply with any instruction received by it from the Collateral Agent in writing that (x) states that an Event of Default has occurred and is continuing and (y) is otherwise in accordance with the terms of this Agreement, without any other or further instructions from such Grantor, and each Grantor agrees that each such issuer shall be fully protected in so complying, and (ii) upon any such instruction following the occurrence and during the continuance of an Event of Default (without further order from the Bankruptcy Court), pay any dividends or other payments with respect to the Investment Property, including Pledged Securities, directly to the Collateral Agent.

6.4 Proceeds to be Turned Over to Collateral Agent.

In addition to the rights of the Secured Parties specified in Section 6.1 with respect to payments of Receivables, if an Event of Default shall occur and be continuing (without further order from the Bankruptcy Court), all Proceeds received by any Grantor consisting of cash, cash

equivalents, checks and other near-cash items shall, if requested in writing by the Collateral Agent, be held by such Grantor in trust for the Secured Parties, segregated from other funds of such Grantor, and shall, forthwith upon receipt by such Grantor, be turned over to the Collateral Agent in the exact form received by such Grantor (duly endorsed by such Grantor to the Collateral Agent, if required). All Proceeds received by the Collateral Agent hereunder shall be held by the Collateral Agent in accordance with the Collateral Agency Agreement and the Credit Agreement. All Proceeds while held by the Collateral Agent (or by such Grantor in trust for the Secured Parties) shall continue to be held as collateral security for all the Obligations and shall not constitute payment thereof until applied as provided in Section 6.5.

6.5 Application of Proceeds. At such intervals as may be agreed upon by any Borrower and the Collateral Agent, or, if an Event of Default shall have occurred and be continuing (without further order from the Bankruptcy Court), at any time at the Collateral Agent's election, the Collateral Agent may apply all or any part of the net Proceeds (after deducting fees and reasonable out-of-pocket expenses as provided in Section 6.6) constituting Collateral realized through the exercise by the Collateral Agent of its remedies hereunder, whether or not held in any Collateral Account, in payment of the Obligations in accordance with the Collateral Agency Agreement and the Credit Agreement.

6.6 Code and Other Remedies.

(a) If an Event of Default shall occur and be continuing (without further order from the Bankruptcy Court), the Collateral Agent, on behalf of the Secured Parties, may exercise, in addition to all other rights and remedies granted to it in this Agreement and in any other instrument or agreement securing, evidencing or relating to the Obligations, all rights and remedies of a secured party under the New York UCC (whether or not the New York UCC applies to the affected Collateral) or its rights under any other applicable Laws or in equity. Without limiting the generality of the foregoing, the Collateral Agent, without demand of performance or other demand, presentment, protest, advertisement or notice of any kind (except any notice required by applicable Laws referred to below) to or upon any Grantor or any other Person (all and each of which demands, defenses, advertisements and notices are hereby waived), may in such circumstances collect, receive, appropriate and realize upon the Collateral, or any part thereof, and may sell, lease, license, assign, give option or options to purchase, or otherwise dispose of and deliver the Collateral or any part thereof (or contract to do any of the foregoing), in one or more parcels at public or private sale or sales, at any exchange, broker's board or office of any Secured Party or elsewhere upon such terms and conditions as it may deem advisable and at such prices as it may deem best, for cash or on credit or for future delivery without assumption of any credit risk. Each Secured Party shall have the right upon any such public sale or sales, and, to the extent permitted by applicable Laws, upon any such private sale or sales, to purchase the whole or any part of the Collateral so sold, free of any right or equity of redemption in any Grantor, which right or equity is hereby waived and released. Each purchaser at any such sale shall hold the property sold absolutely free from any claim or right on the part of any Grantor, and each Grantor hereby waives (to the extent permitted by applicable Laws all rights of redemption, stay or appraisal which it now has or may at any time in the future have under any Laws now existing or hereafter enacted. Each Grantor agrees that, to the extent notice of sale shall be required by applicable Laws at least ten days' notice to such

Grantor of the time and place of any public sale or the time after which any private sale is to be made shall constitute reasonable notification. The Collateral Agent shall not be obligated to make any sale of Collateral regardless of notice of sale having been given. The Collateral Agent may adjourn any public or private sale from time to time by announcement at the time and place fixed therefor, and such sale may, without further notice, be made at the time and place to which it was so adjourned. The Collateral Agent may sell the Collateral without giving any warranties as to the Collateral. The Collateral Agent may specifically disclaim or modify any warranties of title or the like. This procedure will not be considered to adversely affect the commercial reasonableness of any sale of the Collateral. Each Grantor agrees that it would not be commercially unreasonable for the Collateral Agent to dispose of the Collateral or any portion thereof by using Internet sites that provide for the auction of assets of the types included in the Collateral or that have the reasonable capability of doing so, or that match buyers and sellers of assets. To the extent permitted by applicable Laws each Grantor hereby waives any claims against the Collateral Agent arising by reason of the fact that the price at which any Collateral may have been sold at such a private sale was less than the price which might have been obtained at a public sale, even if the Collateral Agent accepts the first offer received and does not offer such Collateral to more than one offeree. Each Grantor further agrees, at the Collateral Agent's request, to assemble the Collateral and make it available to the Collateral Agent at places which the Collateral Agent shall reasonably select, whether at such Grantor's premises or elsewhere. To the extent permitted by applicable Laws, and so long as an Event of Default is continuing, the Collateral Agent shall have the right to enter onto the property where any Collateral is located and take possession thereof with or without judicial process.

(b) The Collateral Agent shall apply the net proceeds of any action taken by it pursuant to this Section 6.6 in accordance with the Collateral Agency Agreement and the Credit Agreement. If the Collateral Agent sells any of the Collateral upon credit, the Grantor will be credited only with payments actually made by the purchaser and received by the Collateral Agent and applied to indebtedness of the purchaser. In the event the purchaser fails to pay for the Collateral, the Collateral Agent may resell the Collateral and the Grantor shall be credited with proceeds of the sale. To the extent permitted by applicable Laws, each Grantor waives all claims, damages and demands it may acquire against any Secured Party arising out of the exercise by any Secured Party of any rights hereunder.

(c) In the event of any disposition of any of the Intellectual Property, the goodwill of the business connected with and symbolized by any Trademarks subject to such disposition shall be included, and the applicable Grantor shall, to the extent commercially reasonable and feasible under the circumstances, supply the Collateral Agent or its designee with such Grantor's know-how and expertise, and with documents and things embodying the same, relating to the manufacture, distribution, advertising and sale of products or the provision of services relating to any Intellectual Property subject to such disposition, and such Grantor's customer lists and other records and documents relating to such Intellectual Property and to the manufacture, distribution, advertising and sale of such products and services.

6.7 Private Sales, etc.

(a) Each Grantor recognizes that the Collateral Agent may be unable to effect a public sale of any or all the Pledged Equity Interests, by reason of certain prohibitions contained in the Securities Act, applicable state, provincial or territorial securities laws or other applicable Laws, and may be compelled to resort to one or more private sales thereof, including, without limitation, to a restricted group of purchasers which will be obliged to agree, among other things, to acquire such securities for their own account for investment and not with a view to the distribution or resale thereof. Each Grantor acknowledges and agrees that any such private sale may result in prices and other terms less favorable than if such sale were a public sale and, notwithstanding such circumstances, agrees that any such private sale shall be deemed to have been made in a commercially reasonable manner. The Collateral Agent shall be under no obligation to delay a sale of any of the Pledged Equity Interests for the period of time necessary to permit the issuer thereof to register such securities for public sale under the Securities Act, under applicable state, provincial or territorial securities laws or other applicable Laws, even if such issuer would agree to do so.

(b) Each Grantor agrees to use commercially reasonable efforts to do or cause to be done all such other acts as may be necessary to make such sale or sales of all or any portion of the Pledged Equity Interests pursuant to this Section 6.7 valid and binding and in compliance with any and all other applicable Requirements of Law. Each Grantor further agrees that a breach of any of the covenants contained in this Section 6.7 will cause irreparable injury to the Secured Parties, that the Secured Parties have no adequate remedy at law in respect of such breach and, as a consequence, that each and every covenant contained in this Section 6.7 shall be specifically enforceable against such Grantor, and such Grantor hereby waives and agrees not to assert any defenses against an action for specific performance of such covenants except for a defense that no Event of Default has occurred and is continuing or a defense of payment.

6.8 Deficiency. Each Grantor shall remain liable for any deficiency if the proceeds of any sale or other disposition of the Collateral are insufficient to pay its Obligations and the reasonable fees and disbursements of any outside attorneys employed by any Secured Party to collect such deficiency.

6.9 Deposit Accounts/Securities Accounts. Upon the occurrence of an Event of Default and during continuation thereof without limiting other remedies available to the Collateral Agent and without further order from the Bankruptcy Court, the Collateral Agent may prevent withdrawals or other dispositions of funds in Deposit Accounts and Securities Accounts subject to control agreements or held with any Secured Party.

SECTION 7 THE COLLATERAL AGENT.

7.1 Collateral Agent's Appointment as Attorney-in-Fact, etc.

(a) Each Grantor hereby irrevocably constitutes and appoints the Collateral Agent, with full power of substitution, as its true and lawful attorney-in-fact with full

irrevocable power and authority in the place and stead of such Grantor and in the name of such Grantor or in its own name, for the purpose of carrying out the terms of this Agreement, to take any and all appropriate action and to execute any and all documents and instruments which may be necessary or desirable to accomplish the purposes of this Agreement, and, without limiting the generality of the foregoing, each Grantor hereby gives the Collateral Agent the power and right, on behalf of such Grantor, without notice to or assent by such Grantor, to do any or all of the following:

(i) in the name of such Grantor or its own name, or otherwise, take possession of and endorse and collect any checks, drafts, notes, acceptances or other instruments for the payment of moneys due under any Receivable or Contract or with respect to any other Collateral and file any claim or take any other action or proceeding in any court of law or equity or otherwise deemed appropriate by the Collateral Agent for the purpose of collecting any and all such moneys due under any Receivable or Contract or with respect to any other Collateral whenever payable;

(ii) in the case of any Intellectual Property, execute and deliver, and have recorded, any and all agreements, instruments, documents and papers as the Collateral Agent may request to evidence the Secured Parties' security interest in such Intellectual Property and the goodwill and general intangibles of such Grantor relating thereto or represented thereby;

(iii) pay or discharge taxes and Liens levied or placed on or threatened against the Collateral, effect any repairs or any insurance called for by the terms of this Agreement and pay all or any part of the premiums therefor and the costs thereof;

(iv) execute, in connection with any sale provided for in Section 6.6 or 6.7, any endorsements, assignments or other instruments of conveyance or transfer with respect to the Collateral; and

(v) direct any party liable for any payment under any of the Collateral to make payment of any and all moneys due or to become due thereunder directly to the Collateral Agent or as the Collateral Agent shall direct; (2) ask or demand for, collect, and receive payment of and receipt for, any and all moneys, claims and other amounts due or to become due at any time in respect of or arising out of any Collateral; (3) sign and endorse any invoices, freight or express bills, bills of lading, storage or warehouse receipts, drafts against debtors, assignments, verifications, notices and other documents in connection with any of the Collateral; (4) commence and prosecute any suits, actions or proceedings at law or in equity in any court of competent jurisdiction to collect the Collateral or any portion thereof and to enforce any other right in respect of any Collateral; (5) defend any suit, action or proceeding brought against such Grantor with respect to any Collateral; (6) settle, compromise or adjust any such suit, action or proceeding and, in connection therewith, give such discharges or releases as the Collateral Agent may deem appropriate; (7) assign any Copyright, Patent or Trademark (along with the

goodwill of the business to which any such Copyright, Patent or Trademark pertains), throughout the world for such term or terms, on such conditions, and in such manner, as the Collateral Agent shall in its sole discretion determine; and (8) generally, sell, transfer, pledge and make any agreement with respect to or otherwise deal with any of the Collateral as fully and completely as though the Collateral Agent were the absolute owner thereof for all purposes, and do, at the Collateral Agent's option and such Grantor's expense, at any time, or from time to time, all acts and things which the Collateral Agent deems necessary to protect, preserve or realize upon the Collateral and the Secured Parties' security interests therein and to effect the intent of this Agreement, all as fully and effectively as such Grantor might do.

Anything in this Section 7.1(a) to the contrary notwithstanding, the Collateral Agent agrees that, except as provided in Section 7.1(b), it will not exercise any rights under the power of attorney provided for in this Section 7.1(a) unless an Event of Default has occurred and is continuing.

(b) If any Grantor fails to perform or comply with any of its agreements contained herein, the Collateral Agent, at its option, but without any obligation so to do, may perform or comply, or otherwise cause performance or compliance, with such agreement; provided, however, that unless an Event of Default has occurred and is continuing or time is of the essence, the Collateral Agent shall not exercise this power without first making demand on the applicable Grantor and such Grantor failing to promptly comply therewith.

(c) The expenses of the Collateral Agent incurred in connection with actions undertaken as provided in this Section 7.1, together with interest thereon at a rate *per annum* equal to the rate *per annum* at which interest would then be payable on past due Revolving Loans that are Base Rate Loans under the Credit Agreement, from the date of payment by the Collateral Agent to the date reimbursed by the relevant Grantor, shall be payable by such Grantor to the Collateral Agent on demand.

(d) Each Grantor hereby ratifies all that said attorneys shall lawfully do or cause to be done by virtue hereof. All powers, authorizations and agencies contained in this Agreement are coupled with an interest and are irrevocable until this Agreement is terminated and the security interests created hereby are released.

7.2 Duty of Collateral Agent. The Collateral Agent's sole duty with respect to the custody, safekeeping and physical preservation of the Collateral in its possession, under Section 9-207 of the New York UCC or otherwise, shall be to deal with it in the same manner as the Collateral Agent deals with similar property for its own account. Neither the Collateral Agent, nor any other Secured Party nor any of their respective officers, directors, partners, employees, agents, attorneys and other advisors, attorneys-in-fact or affiliates shall be liable for failure to demand, collect or realize upon any of the Collateral or for any delay in doing so or shall be under any obligation to sell or otherwise dispose of any Collateral upon the request of any Grantor or any other Person or to take any other action whatsoever with regard to the Collateral or any part thereof. The powers conferred on the Secured Parties hereunder are solely to protect the Secured Parties'

interests in the Collateral and shall not impose any duty upon any Secured Party to exercise any such powers. The Secured Parties shall be accountable only for amounts that they actually receive as a result of the exercise of such powers, and neither they nor any of their officers, directors, partners, employees, agents, attorneys and other advisors, attorneys-in-fact or affiliates shall be responsible to any Grantor for any act or failure to act hereunder, except to the extent that any such act or failure to act is found by a final and nonappealable decision of a court of competent jurisdiction to have resulted from their own gross negligence or willful misconduct in breach of a duty owed to such Grantor.

7.3 Execution of Financing Statements. Each Grantor acknowledges that pursuant to Section 9-509(b) of the New York UCC and any other applicable Laws, each Grantor authorizes the Collateral Agent to file or record financing or continuation statements, and amendments thereto, and other filing or recording documents or instruments with respect to the Collateral, without the signature of such Grantor, in such form and in such offices as the Collateral Agent reasonably determines appropriate to perfect or maintain the perfection of the security interests of the Collateral Agent under this Agreement. Because each security interest granted hereunder is intended to cover substantially all the assets of each Grantor, each Grantor agrees that such financing statements may describe the collateral in the same manner as described in this Agreement or as "all assets," "all personal property" or words of similar effect, regardless of whether or not the Collateral includes all assets or all personal property of such Grantor, or such other description as the Collateral Agent, in its sole judgment, determines is necessary or advisable that is of an equal or lesser scope or with greater detail. A photographic or other reproduction of this Agreement shall, where permitted by applicable Laws, be sufficient as a financing statement or other filing or recording document or instrument for filing or recording in any jurisdiction.

7.4 Authority of Collateral Agent. Each Grantor acknowledges that the rights and responsibilities of the Collateral Agent under this Agreement with respect to any action taken by the Collateral Agent or the exercise or non-exercise by the Collateral Agent of any option, voting right, request, judgment or other right or remedy provided for herein or resulting or arising out of this Agreement shall, as between the Collateral Agent and the other Secured Parties, be governed by the Collateral Agency Agreement and by such other agreements with respect thereto as may exist from time to time among them, but, as between the Collateral Agent and the Grantors, the Collateral Agent shall be conclusively presumed to be acting as agent for the Secured Parties with full and valid authority so to act or refrain from acting, and no Grantor shall be under any obligation, or entitlement, to make any inquiry respecting such authority.

7.5 Appointment of Co-Collateral Agents. Subject to the Collateral Agency Agreement, at any time or from time to time, in order to comply with any applicable requirement of law, the Collateral Agent may appoint another bank or trust company or one of more other Persons, either to act as co-agent or agents on behalf of the Secured Parties with such power and authority as may be necessary for the effectual operation of the provisions hereof and which may be specified in the instrument of appointment (which may, in the discretion of the Collateral Agent, include provisions for indemnification and similar protections of such co-agent or separate agent).

SECTION 8 MISCELLANEOUS.

8.1 Amendments in Writing. None of the terms or provisions of this Agreement may be waived, amended, supplemented or otherwise modified except by a written instrument executed by each affected Grantor and the Collateral Agent, subject to any consents required under Section 11.1 of the Credit Agreement. Notwithstanding the foregoing, Section 8.17 shall be supplemented by each applicable Assumption Agreement, as set forth therein, in a manner satisfactory to each Administrative Agent, the Collateral Agent and each applicable additional Grantor executing such Assumption Agreement.

8.2 Notices. All notices, requests and demands to or upon the Collateral Agent or any Grantor hereunder shall be effected in the manner provided for in the Collateral Agency Agreement; provided that any such notice, request or demand to or upon any Grantor shall be addressed to such Grantor at its notice address set forth on Schedule 8.2.

8.3 No Waiver by Course of Conduct; Cumulative Remedies. No Secured Party shall by any act (except by a written instrument pursuant to Section 8.1), delay, indulgence, omission or otherwise be deemed to have waived any right or remedy hereunder or to have acquiesced in any Default or Event of Default. No failure to exercise, nor any delay in exercising, on the part of any Secured Party, any right, power or privilege hereunder shall operate as a waiver thereof. No single or partial exercise of any right, power or privilege hereunder shall preclude any other or further exercise thereof or the exercise of any other right, power or privilege. A waiver by any Secured Party of any right or remedy hereunder on any one occasion shall not be construed as a bar to any right or remedy which such Secured Party would otherwise have on any future occasion. The rights and remedies herein provided are cumulative, may be exercised singly or concurrently and are not exclusive of any other rights or remedies provided by law.

8.4 Enforcement Expenses; Indemnification.

(a) (i) Section 11.3 of the Credit Agreement shall be incorporated by reference herein *mutatis mutandis* with respect to each Grantor's payment and reimbursement obligations to each Secured Party, and (ii) the applicable provision governing reimbursement of costs and expenses, if any, under the Collateral Agency Agreement shall be incorporated by reference herein *mutatis mutandis* with respect to each Grantor's payment or reimbursement obligations to the Collateral Agent.

(b) (i) Section 11.4 of the Credit Agreement shall be incorporated by reference herein *mutatis mutandis* with respect to each Grantor's indemnification obligations to each Secured Party, and (ii) the applicable provision governing indemnification, if any, under the Collateral Agency Agreement shall be incorporated by reference herein *mutatis mutandis* with respect to each Grantor's indemnification Obligations to the Collateral Agent.

(c) The agreements in this Section shall survive repayment of the Obligations and all other amounts payable under the Credit Agreement and the other Loan Documents.

8.5 Successors and Assigns. This Agreement shall be binding upon the successors and assigns of each Grantor and shall inure to the benefit of the Secured Parties and their permitted successors and assigns; provided that, except as otherwise permitted by the Credit Agreement and

each other Loan Document, no Grantor may assign, transfer or delegate any of its rights or obligations under this Agreement without the prior written consent of the Collateral Agent, and any attempted assignment without such consent shall be null and void.

8.6 Set-Off. Each Grantor hereby irrevocably authorizes each Secured Party at any time and from time to time, to the fullest extent permitted by law, while an Event of Default has occurred and is continuing (without further order from the Bankruptcy Court), without notice to such Grantor or any other Grantor, any such notice being expressly waived by each Grantor, to set-off and appropriate and apply any and all deposits (general or special, time or demand, provisional or final) at any time held, in any currency, and any other credits, indebtedness or claims, in any currency, in each case whether direct or indirect, absolute or contingent, matured or unmatured, at any time held or owing by such Secured Party or their Affiliates to or for the credit or the account of such Grantor, or any part thereof in such amounts as such Secured Party may elect, against and on account of any and all of the Obligations now or hereafter existing whether or not such Secured Party shall have made any demand for payment and even though such Obligations may be contingent or unmatured. Each Secured Party shall notify such Grantor promptly of any such set-off and the application made by such Secured Party or its respective Affiliates, provided that the failure to give such notice shall not affect the validity of such set-off and application. The rights of each Secured Party under this Section are in addition to other rights and remedies (including other rights of set-off) which such Secured Party may have.

8.7 Counterparts. This Agreement may be executed in any number of counterparts and by different parties in separate 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. Signature pages may be detached from multiple separate counterparts and attached to a single counterpart so that all signature pages are attached to the same document. Delivery of an executed counterpart of a signature page of this Agreement by electronic transmission or telecopy shall be effective as delivery of a manually executed counterpart hereof.

8.8 Severability. If any provision of this Agreement is held to be illegal, invalid or unenforceable, (a) the legality, validity and enforceability of the remaining provisions of this Agreement shall not be affected or impaired thereby and (b) the parties shall endeavor in good faith negotiations to replace the illegal, invalid or unenforceable provisions with valid provisions the economic effect of which comes as close as possible to that of the illegal, invalid or unenforceable provisions. The invalidity of a provision in a particular jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction.

8.9 Section Headings. The Section headings used in this Agreement are for convenience of reference only and are not to affect the construction hereof or be taken into consideration in the interpretation hereof.

8.10 Integration. This Agreement, together with the Collateral Agency Agreement and all of the other Loan Documents and all certificates and documents delivered hereunder or thereunder, embodies the entire agreement of the parties and supersedes all prior agreements and understandings relating to the subject matter hereof. Delivery of an executed signature page of this Agreement shall be as effective as delivery of a manually executed counterpart hereof.

8.11 APPLICABLE LAW. THIS AGREEMENT AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES HERETO (INCLUDING THE SUBMISSION TO JURISDICTION IN SECTION 8.12) SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK AND, TO THE EXTENT APPLICABLE, THE BANKRUPTCY CODE, WITHOUT REGARD TO ITS CONFLICTS OF LAWS PROVISIONS.

8.12 Submission to Jurisdiction; Waivers. Each Grantor hereby irrevocably and unconditionally:

(a) agrees that any legal action or proceeding with respect to this Agreement shall be brought in the Bankruptcy Court or, to the extent that the Bankruptcy Court does not have (or abstains from exercising) jurisdiction, the courts of the State of New York sitting in New York County or of the United States of America for the Southern District of New York, and, by execution and delivery of this Agreement, each party hereto accepts for itself and in respect of its property, generally and unconditionally, the exclusive jurisdiction of the aforesaid courts, except that the Collateral Agent or any of the Secured Parties may, in their sole discretion, bring legal action or proceedings in other appropriate jurisdictions with respect to the enforcement of its rights with respect to the Collateral. Each Grantor hereby irrevocably waives any right to any other jurisdiction to which it may be entitled on account of domicile, residence or otherwise and waives any objection, including any objection to the laying of venue or based on the grounds of *forum non conveniens*, that such Grantor may now or hereafter have to the bringing of any such action or proceeding in such respective jurisdictions;

(b) consents and agrees to the service of any and all process in any such action or proceeding by the mailing (by registered or certified mail, postage prepaid) of copies of such process to such Grantor at its address referred to in Section 8.2 or to any Borrower at their addresses specified in Section 8.2. Each Grantor 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 applicable Laws;

(c) agrees that nothing contained in this Section 8.12 shall affect the right of the Collateral Agent or any Secured Party to serve process in any other manner permitted by applicable Laws, or commence legal proceedings or otherwise proceed against any Grantor in any other jurisdiction;

(d) to the extent that such Grantor has or hereafter may acquire any immunity from jurisdiction of any court or from any legal process (whether from service or notice, attachment prior to judgment, attachment in aid of execution of a judgment, execution or otherwise), hereby irrevocably waives such immunity in respect of its obligations hereunder; and

(e) waives, to the maximum extent not prohibited by law, any right it may have to claim or recover in any legal action or proceeding referred to in this Section 8.12 any special, exemplary, punitive or consequential damages.

8.13 Acknowledgments. Each Grantor hereby acknowledges that:

(a) it has been advised by counsel in the negotiation, execution and delivery of this Agreement, the Collateral Agency Agreement, and each other Loan Document to which it is a party;

(b) no Secured Party has any fiduciary relationship with or duty to any Grantor arising out of or in connection with this Agreement, the Collateral Agency Agreement or any of the other Loan Documents, and the relationship between the Grantors, on the one hand, and the Secured Parties, on the other hand, in connection herewith or therewith is solely that of debtor and creditor; and

(c) no joint venture is created hereby or by the Collateral Agency Agreement or the other Loan Documents or otherwise exists by virtue of the transactions contemplated hereby among the Secured Parties or among the Grantors and the Secured Parties.

8.14 Additional Grantors. Each Subsidiary of the Parent that is required to become a party to this Agreement pursuant to Section 7.11 of the Credit Agreement shall become a Grantor for all purposes of this Agreement upon execution and delivery by such Subsidiary of an Assumption Agreement in the form of Annex 1 hereto.

8.15 Releases.

(a) Upon the occurrence of the Pledge and Security Termination Date, the Collateral shall be released from the Liens created hereby, and this Agreement and all obligations (other than those expressly stated to survive such termination) of the Collateral Agent and each Grantor hereunder shall terminate, all without delivery of any instrument or performance of any act by any party, and all rights to the Collateral shall revert to the Grantors. At the request and sole expense of any Grantor following any such termination, the Collateral Agent shall deliver to such Grantor any Collateral held by the Collateral Agent hereunder, and execute and deliver to such Grantor such documents as such Grantor shall reasonably request to evidence such termination.

(b) The Collateral Agent shall release or subordinate any Lien held by the Collateral Agent for the benefit of the Secured Parties and/or release any Grantor in its entirety as a Grantor hereunder, in each case, at the instruction of one or more of the Administrative Agents (which instruction is certified by such Administrative Agent or Administrative Agents or the Borrower to be in accordance with the Credit Agreement, provided that the Collateral Agent shall have no duty to investigate the truthfulness or any underlying fact of such certification). At the request and sole expense of any applicable Grantor, the Collateral Agent, at the instruction of one or more of the Administrative Agents (which instruction is certified by such Administrative Agent or Administrative Agents or the Borrower to be in accordance with the Credit Agreement, provided that the Collateral Agent shall have no duty to investigate the truthfulness or any underlying fact of such certification), shall execute and deliver to such Grantor all releases or other documents reasonably necessary for the release of the Liens created hereby on any such Collateral or the release of such Grantor of its Obligations hereunder, as applicable.

(c) Each Grantor acknowledges that it is not authorized to file any financing statement or amendment or termination statement with respect to any financing statement originally filed in connection herewith without the prior written consent of the Collateral Agent, subject to such Grantor's rights under Sections 9-509(d)(2) and 9-518 of the New York UCC.

8.16 WAIVER OF JURY TRIAL. EACH GRANTOR AND COLLATERAL AGENT WAIVES TRIAL BY JURY IN ANY ACTION OR PROCEEDING WITH RESPECT TO THIS AGREEMENT, THE COLLATERAL AGENCY AGREEMENT OR ANY OTHER LOAN DOCUMENT.

8.17 Riders for Certain Jurisdictions.

(a) Norway

(i) Notwithstanding anything set out to the contrary in this Agreement, the Collateral Agency Agreement or any other Loan Document to the contrary:

(1) the obligation of J. Ray McDermott (Norway) AS (and any other Grantor from time to time incorporated under the laws of Norway) to grant Collateral shall be limited to what is legally permitted under mandatory Norwegian law; and

(2) the obligations and liabilities of J. Ray McDermott (Norway) AS (and any other Grantor from time to time incorporated under the laws of Norway) under any provision of this Agreement, the Collateral Agency Agreement or any other Loan Document to which it is a party shall not include any obligations or liabilities to the extent they would constitute unlawful financial assistance within the meaning of Section 8-7 and/or 8-10, cfr. Section 1-4, of the Norwegian Companies Act of 13 June 1997 no. 44, and the obligations and liabilities of J. Ray McDermott (Norway) AS (and any other Grantor from time to time incorporated under the laws of Norway) under this Agreement, the Collateral Agency Agreement or any other Loan Document only apply to the extent permitted by those provisions of the Norwegian Companies Act of 13 June 1997 no. 44; and

(ii) The total liability of each of J. Ray McDermott (Norway) AS and any other Grantor from time to time incorporated under the laws of Norway under this Agreement, the Collateral Agency Agreement or any other Loan Document to which it is a party shall never exceed \$15,000,000,000 plus interest thereon and fees, costs and expenses as set out in this Agreement, the Collateral Agency Agreement or any other Loan Document.

(b) Ireland

(i) The obligations and liabilities of any Grantor incorporated in Ireland shall not extend to any obligations or liabilities to the extent that doing so would constitute unlawful financial assistance within the meaning of Section 82 of the Companies Act 2014 of Ireland notwithstanding any applicable exemptions and/or undertaking of any applicable prescribed

whitewash, summary approval procedure or similar financial assistance procedure.

(c) Cayman

(i) Each Grantor of a security interest over Pledged Stock issued by a company incorporated in the Cayman Islands shall deliver to the Collateral Agent a duly executed and undated instrument of transfer in respect of such Pledged Stock at the times and in the manner stipulated in Schedule 7.14 to the Credit Agreement.

(ii) Each Grantor hereby irrevocably waives any right to require a proceeding first against a Borrower or any other Person, any right to request the division of their payment obligation among the Grantors and any right to request that collateral be foreclosed upon, however such rights may be denominated under the laws of any jurisdiction.

(d) Canada

(i) Each Canadian Grantor confirms that value has been given by the Secured Parties to the Grantors, that each Canadian Grantor has rights in its Collateral existing at the date of this Agreement and that the Grantors and the Collateral Agent have not agreed to postpone the time for attachment of the security interests created under this Agreement to any of the Collateral. The Security Interests shall have effect and be deemed to be effective whether or not any secured obligations or any part thereof are owing or in existence before or after or upon the date of this Agreement.

(ii) Each of the Grantors acknowledges that certain of the Collateral may now or in the future consist of shares or other equity interests in the capital stock of an unlimited company, unlimited liability corporation or unlimited liability company incorporated or established in Canada (a "Canadian ULC"), and that it is the intention of the Collateral Agent and the Grantors that the Collateral Agent should not under any circumstances prior to realization thereon be held to be a "member" or a "shareholder", as applicable, of a Canadian ULC for the purposes of the *Companies Act* (Nova Scotia), the *Business Corporations Act* (Alberta), the *Business Corporations Act* (British Columbia) or any other present or future Laws governing Canadian ULCs. Therefore, notwithstanding any provisions to the contrary contained in this Agreement, the Credit Agreement or any other Loan Document, where a Grantor is the registered owner of shares in a Canadian ULC which are Collateral, that Grantor shall remain the sole registered owner of such Canadian ULC shares until such time as such ULC shares are effectively transferred into the name of the Collateral Agent or any other Person on the books and records of the applicable Canadian ULC. Accordingly, the Grantors shall be entitled to receive and retain for their own account any dividend on or other distribution, if any, with respect to such Canadian ULC shares and shall have the right to vote such Canadian ULC shares and to control the direction, management and policies of the applicable Canadian ULC to the same extent as the relevant Grantor would if such

Canadian ULC shares were not pledged to the Collateral Agent pursuant hereto. Nothing in this Agreement, the Credit Agreement or any other Loan Document is intended to, and nothing in this Agreement, the Credit Agreement or any other Loan Document shall, constitute the Collateral Agent or any Person other than the Grantors, a member or shareholder of a Canadian ULC for the purposes of any Canadian ULC Laws (whether listed or unlisted, registered or beneficial), until such time as notice is given to the Grantors and further steps are taken pursuant hereto or thereto so as to register the Collateral Agent or such other Person, as specified in such notice, as the holder of such Canadian ULC shares. To the extent any provision hereof would have the effect of constituting the Collateral Agent as a member or a shareholder, as applicable, of any Canadian ULC prior to such time, such provision shall be severed herefrom and shall be ineffective with respect to Canadian ULC shares which are Collateral without otherwise invalidating or rendering unenforceable this Agreement or invalidating or rendering unenforceable such provision insofar as it relates to Collateral which is not Canadian ULC shares. Except upon the exercise of rights of the Collateral Agent to sell, transfer or otherwise dispose of any Canadian ULC shares in accordance with this Agreement, the Grantors shall not cause or permit, or enable an issuer that is a Canadian ULC to cause or permit, the Collateral Agent to: (i) be registered as a shareholder or member of such issuer; (ii) have any notation entered in their favour in the share register of such issuer; (iii) be held out as shareholders or members of such issuer; (iv) receive, directly or indirectly, any dividends, property or other distributions from such issuer by reason of the Collateral Agent holding a security interest over the Canadian ULC shares; or (iv) act as a shareholder of such issuer, or exercise any rights of a shareholder including the right to attend a meeting of shareholders of such issuer or to vote its shares.

(e) Arkansas

FOR THE AVOIDANCE OF DOUBT, WITH RESPECT TO ANY GRANTOR ORGANIZED IN ARKANSAS, THIS AGREEMENT AND ALL LOAN DOCUMENTS ARE AND ARE INTENDED TO BE IN SUPPORT OF CONTRACTS TO BORROW OR LEND MONEY.

The Parent and certain of its Subsidiaries (collectively, the “Debtors”) have proposed a Joint Chapter 11 Plan of Reorganization pursuant to the provisions of Chapter 11 of Title 11 of the United States Code. Reference should be made to the Disclosure Statement filed on January 21, 2020 which provides pertinent information regarding the Debtors’ businesses and these joint plans.

(f) Liechtenstein

(i) If and to the extent that (i) the obligations of a Grantor incorporated under the laws of Liechtenstein (each, a “Liechtenstein Grantor”) which arise under this Agreement or any other Loan Document as well as any payments thereunder are for the benefit of the Liechtenstein Grantor's (a) direct or indirect shareholder(s), or (b) other affiliated companies (other than its direct or indirect

subsidiaries), and (ii) complying with such obligations would constitute a violation of Art. 545 (2) of the Liechtenstein Persons and Companies Act (*Personen- und Gesellschaftsrecht*) or similar mandatory provisions of Liechtenstein corporate law prohibiting capital repayment or restricting profit distributions, then the aggregate obligations of the Liechtenstein Grantor under this Agreement and any other Loan Document shall be limited as follows:

(1) The aggregate obligations of the Liechtenstein Grantor under any Loan Document (including but not limited to this Agreement) including the proceeds from the enforcement of any security interest granted by the Liechtenstein Grantor under any Loan Document shall be limited to the maximum amount of the Liechtenstein Grantor's distributable net assets available for distribution to the shareholders of the respective Liechtenstein Grantor in accordance with Art. 545 (2) of the Liechtenstein Persons and Companies Act (*Personen- und Gesellschaftsrecht*) and other mandatory provisions of Liechtenstein corporate law and the provisions of its articles of association and by-laws (net of taxes, if applicable) at the time the relevant payment becomes due (from time to time, each a "Liechtenstein Minimum Amount").

(2) The limitations set out herein (as may apply) shall not (generally or definitively) free the Liechtenstein Grantor from its obligations hereunder or under any other Loan Document in excess thereof, but merely postpone the fulfilment date thereof until such time or times as fulfilment is again possible in accordance with the above mentioned limitations.

(3) In order to allow the Secured Parties to obtain the maximum benefit under and out of this Agreement and the other Loan Documents, the Liechtenstein Grantor undertakes to promptly implement all such measures and/or to promptly procure the fulfilment of all prerequisites allowing it to make the (requested) payment(s), including the following:

(A) preparation of an audited interim balance sheet (*geprüfter Zwischenabschluss*) of the Liechtenstein Grantor in accordance with generally accepted accounting principles and Liechtenstein law, observing the accounting principles applied in the previous years for the creation of the non-consolidated financial statement;

(B) confirmation of the auditors of the relevant Liechtenstein Grantor that the relevant Liechtenstein Minimum Amount represents (the maximum of) freely distributable profits;

(C) approval by the shareholder(s) of the Liechtenstein Grantor of the (resulting) profit distribution in the amount of the Liechtenstein Minimum Amount; and

(D) all such other measures necessary or useful to allow the Liechtenstein Grantor to fulfil its obligations hereunder with a minimum of limitation, including the conversion of unnecessary restricted reserves into distributable reserves and the disposal of any of its assets that are not required for the Liechtenstein Grantor's business and the book value of which is significantly lower than its market value, in which case the Liechtenstein

Grantor shall notify the Collateral Agent immediately about the sale proceeds and the book value of its respective assets and of the realized hidden reserves (*stille Reserven*).

(ii) For the avoidance of doubt, the limitations hereinbefore referred to shall not lead to an obligation of the Liechtenstein Grantor to decrease its statutory capital or statutory reserves (*statutarischer Reservefonds*).

(g) Malaysia

(i) Notwithstanding anything set out to the contrary in this Agreement, the Credit Agreement, the Collateral Agency Agreement or any other Loan Document to the contrary:

- (1) the obligation of the Malaysian Grantor to grant the Collateral shall be limited to what is legally permitted under Malaysian law;
- (2) prior to the BNM Security Commencement Date, the Malaysian Grantor shall not be obliged to secure any obligation and/or liability of any Borrower under any provision of this Agreement, the Credit Agreement, the Collateral Agency Agreement or any other Loan Document; and
- (3) on the BNM Security Commencement Date and thereafter, the Malaysian Grantor shall secure such obligations and liabilities of each Borrower under or in connection with this Agreement, the Credit Agreement, the Collateral Agency Agreement or any other Loan Document to the extent as permitted under the BNM Approval subject to such terms and conditions as may be imposed by BNM in the BNM Approval.

(ii) For the purpose of sub-paragraph (i) above:

- (1) "BNM" means Bank Negara Malaysia, a statutory body established under the Central Bank of Malaysia Act 2009.
- (2) "BNM Approval" means the written approval of BNM in respect of the financial guarantee provided by the Malaysian Grantor under this Agreement which is required to be approved by BNM pursuant to the Malaysian Financial Services Act 2013 and the Malaysian foreign exchange administration notices issued by BNM.
- (3) "BNM Security Commencement Date" means the date on which the BNM Approval has been obtained.
- (4) "Malaysian Grantor" means McDermott Asia Pacific Sdn Bhd, a company which is established under the laws of Malaysia.

(h) Kingdom of Saudi Arabia

(i) Notwithstanding anything in this Agreement to the contrary, the obligations and liabilities under this Agreement of any Grantor incorporated in the Kingdom of Saudi Arabia ("Saudi Arabia") shall not extend to any obligations or liabilities if and to the extent that such obligations or liabilities would be repugnant to Islamic law (*Shari'ah*) as interpreted and applied in Saudi Arabia.

(ii) Subject to paragraph (i) of this Section 8.17(h), the Collateral Agent and any Grantor incorporated in Saudi Arabia agree that:

(1) the Security Interests constituted by this Agreement secure obligations and liabilities that constitute an 'economic debt' within the meaning of Article 1 of the Commercial Pledge Law of Saudi Arabia, as issued by Royal Decree No. M/86 dated 08/08/1439 H (corresponding to 24 April 2018 G); and

(2) the maximum amount of such obligations and liabilities is \$ 5,000,000,000 and the scheduled final maturity date of such obligations and liabilities is January 19, 2021 (or such earlier date as may be determined pursuant to the terms of the Credit Agreement).

(i) Brazil.

(i) Notwithstanding anything set out to the contrary in this Agreement, the Collateral Agency Agreement or any other Loan Document or Secured Debt Document to the contrary:

(1) the obligation of any Grantor incorporated under the laws of the Federative Republic of Brazil to grant any Collateral shall be limited to what is legally permitted under Brazilian law; and

(2) any Collateral to be created over any property or any asset of a Grantor located in Brazil shall be governed by Brazilian law, as per Section 8 of Brazilian Federal Decreto-Lei No. 4.657, of September 4, 1942.

8.18 Excluded Subsidiaries. Notwithstanding anything in this Agreement to the contrary, if any Subsidiary of the Parent has executed and delivered this Agreement to become a Grantor hereunder, or has otherwise become a party to this Agreement as a Grantor, and such Subsidiary is or becomes an Excluded Subsidiary under clause (a) of the definition thereof, such Subsidiary will not be considered a party to this Agreement or a Grantor hereunder in any respects, and will not have any obligations under this Agreement, until such time that it is no longer an Excluded Subsidiary under clause (a) of the definition thereof.

8.19 Intellectual Property Filings. Notwithstanding anything in this Agreement to the contrary and without limiting the obligation of the Grantors to execute and deliver to the Collateral Agent Intellectual Property Security Agreements pursuant to the terms hereof, on the Effective Date the Collateral Agent shall not file any Intellectual Property Security Agreement with the United States Patent and Trademark Office or the United States Copyright Office that covers only Intellectual Property owned or utilized by CBI's technology segment if the Parent shall have notified the Collateral Agent in writing that such filing would have a material and adverse impact on the business of CBI's technology segment. After the Effective Date, the Collateral Agent shall,

in its sole and absolute discretion, be permitted to file any Intellectual Property Agreements with the United States Patent and Trademark Office or the United States Copyright Office, as applicable, after consultation with the Parent and provided that an Event of Default has occurred or an event has occurred that, but for an amendment or waiver thereof, could have become an Event of Default.

8.20 Collateral Agency Agreement; DIP Orders. This Agreement, the Liens created hereby and the rights, remedies, duties and obligations provided for herein are subject in all respects to the provisions of the Collateral Agency Agreement and the DIP Orders, as applicable. Subject to the last sentence of this Section 8.20, in the event of a conflict or any inconsistency between the terms of the Collateral Agency Agreement and this Agreement, the terms of such Collateral Agency Agreement shall prevail. In the event of a conflict or any inconsistency between the terms of the Collateral Agency Agreement, the DIP Orders and this Agreement, the terms of the DIP Orders shall govern and control.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed by their respective officers thereunto duly authorized as of the day and year first above written.

MCDERMOTT TECHNOLOGY (AMERICAS), INC.,
as Borrower

By: 
Name: Kevin Hargrove
Title: Treasurer

MCDERMOTT TECHNOLOGY (US), INC.,
as Borrower

By: 
Name: Kevin Hargrove
Title: Treasurer

MCDERMOTT TECHNOLOGY, B.V.,
as Borrower

By: 
Name: Kevin Hargrove
Title: Attorney

MCDERMOTT INTERNATIONAL, INC.,
as Parent

By: 
Name: Kevin Hargrove
Title: Vice President, Treasurer

CB&I BRAZIL HOLDINGS, INC.
CB&I ENERGY SERVICES, LLC
CB&I FABRICATION, LLC
CB&I GROUP INC.
CB&I HOLDCO INTERNATIONAL, LLC
CB&I HOLDCO, LLC
CB&I INTERNATIONAL, INC.
CB&I INTERNATIONAL, LLC
CB&I LAKE CHARLES, L.L.C.
CB&I OFFSHORE SERVICES, INC.
CB&I POWER INTERNATIONAL, INC.
CB&I POWER, LLC
CB&I RIO GRANDE HOLDINGS, L.L.C.
CB&I RIO GRANDE VALLEY FABRICATION & MANUFACTURING, L.L.C.
CB&I WALKER LA, L.L.C.
INTERNATIONAL CONSULTANTS, L.L.C.
J. RAY HOLDINGS, INC.
MCDERMOTT, INC.
PIKE PROPERTIES II, INC.
SHAW ENERGY SERVICES, INC.
SHAW FABRICATORS, INC.
SHAW HOME LOUISIANA, LLC
SHAW JV HOLDINGS, L.L.C.
SHAW MANAGED SERVICES, LLC
SHAW NUCLEAR ENERGY HOLDINGS (UK), INC.
SHAW POWER DELIVERY SYSTEMS, INC.
SHAW POWER SERVICES, LLC
SHAW PROCESS FABRICATORS, INC.
SHAW SERVICES, L.L.C.
SHAW SSS FABRICATORS, INC.

By: _____

Name: Kevin Hargrove

Title: Assistant Treasurer

CATALYTIC DISTILLATION TECHNOLOGIES
CB&I INTERNATIONAL ONE, LLC
CBI SERVICES, LLC
CHEMICAL RESEARCH AND LICENSING, LLC
EDS EQUIPMENT COMPANY, LLC
LUMMUS CONSULTANTS INTERNATIONAL LLC
S C WOODS, L.L.C.
SHAW FAR EAST SERVICES, LLC
SHAW POWER SERVICES GROUP, L.L.C.
CB&I STORAGE TANK SOLUTIONS LLC
CB&I STS DELAWARE LLC
CB&I STS HOLDINGS LLC
CBI COMPANY LTD.
CSA TRADING COMPANY LTD.
OCEANIC CONTRACTORS, INC.
SHAW NC COMPANY, INC.

By: 

Name: Kevin Hargrove

Title: Authorized Person

SHAW BENECO, INC.
SHAW MANAGEMENT SERVICES ONE, INC.
SHAW TRANSMISSION & DISTRIBUTION SERVICES,
INC.
SHAW INTERNATIONAL MANAGEMENT SERVICES
TWO, INC.
SHAW POWER TECHNOLOGIES, INC.

By: 

Name: Kevin Hargrove

Title: Assistant Treasurer

HYDRO MARINE SERVICES, INC.
J. RAY MCDERMOTT INTERNATIONAL, INC.
J. RAY MCDERMOTT, S.A.
MCDERMOTT (AMAZON CHARTERING), INC.
MCDERMOTT GULF OPERATING COMPANY, INC.
MCDERMOTT INTERNATIONAL MANAGEMENT, S. DE
RL.
MCDERMOTT INTERNATIONAL TRADING CO., INC.
MCDERMOTT INTERNATIONAL VESSELS, INC.
J. RAY MCDERMOTT FAR EAST, INC.
J. RAY MCDERMOTT UNDERWATER SERVICES, INC.
MCDERMOTT CASPIAN CONTRACTORS, INC.
MCDERMOTT INTERNATIONAL INVESTMENTS CO.,
INC.
MCDERMOTT MIDDLE EAST, INC.
MCDERMOTT OLD JV OFFICE, INC.
MCDERMOTT OVERSEAS, INC.
MCDERMOTT SUBSEA, INC.
EASTERN MARINE SERVICES, INC.
MCDERMOTT OFFSHORE SERVICES COMPANY, INC.
NORTH ATLANTIC VESSEL, INC.

By: 

Name: Kevin Hargrove

Title: Treasurer

CBI PANAMA, S.A.

By: 


Name: Kevin Hargrove

Title: Authorized Person

Executed as a Deed by
CB&I MIDDLE EAST HOLDING, INC.

By: 
Name: Kevin Hargrove
Title: Treasurer


Witnessed

By: 
Name: Traci Brown
Title: Paralegal

Executed as a Deed by
ENVIRONMENTAL SOLUTIONS (CAYMAN) LTD.

By: 
Name: Kevin Hargrove
Title: Treasurer


Witnessed

By: 
Name: Traci Brown
Title: Paralegal

Executed as a Deed by
ENVIRONMENTAL SOLUTIONS HOLDING LTD.

By: 
Name: Kevin Hargrove
Title: Treasurer


Witnessed

By: 
Name: Traci Brown
Title: Paralegal

Executed as a Deed by
ENVIRONMENTAL SOLUTIONS LTD.

By: 
Name: Kevin Hargrove
Title: Authorized Person

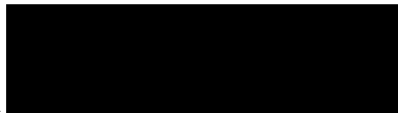
Witnessed

By: 
Name: Traci Brown
Title: Paralegal

Executed as a Deed by
HIGHLAND TRADING COMPANY, LTD.

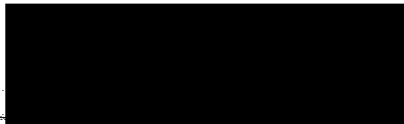
By: 
Name: Kevin Hargrove
Title: Authorized Person

Witnessed


By: 
Name: Traci Brown
Title: Paralegal



Executed as a Deed by
OASIS SUPPLY COMPANY, LTD.

By: 
Name: Kevin Hargrove
Title: Authorized Person

Witnessed 
By: 
Name: Traci Brown
Title: Paralegal

Executed as a Deed by
SHAW E & INTERNATIONAL LTD.

By: 
Name: Kevin Hargrove
Title: Treasurer

Witnessed 
By: 
Name: Traci Brown
Title: Paralegal

Executed as a Deed by
SHAW OVERSEAS (MIDDLE EAST) LTD.

By: 
Name: Kevin Hargrove
Title: Treasurer

Witnessed 
By: 
Name: Traci Brown
Title: Paralegal

Executed as a Deed by

J. RAY MCDERMOTT INTERNATIONAL VESSELS, LTD.

By: 

Name: Kevin Hargrove

Title: Treasurer

Witnessed

By: 

Name: Traci Brown

Title: Paralegal

Executed as a Deed by

MCDERMOTT CAYMAN LTD.

By: 

Name: Kevin Hargrove

Title: Assistant Treasurer

Witnessed

By: 

Name: Traci Brown

Title: Paralegal

Executed as a Deed by

OFFSHORE PIPELINES INTERNATIONAL, LTD.

By: 

Name: Kevin Hargrove

Title: Assistant Treasurer

Witnessed

By: 

Name: Traci Brown

Title: Paralegal

J. RAY MCDERMOTT (NORWAY), AS

By: 

Name: Kevin Hargrove

Title: Treasurer

CB&I CANADA LTD.
HORTON CBI, LIMITED
LUTECH RESOURCES CANADA LTD.

By: 

Name: Kevin Hargrove

Title: Authorized Person

MCDERMOTT TECHNOLOGY, B.V.
CB&I COJAFEX B.V.
CB&I EUROPE B.V.
CB&I HOLDINGS B.V.
CB&I POWER COMPANY B.V.
CB&I RUSLAND B.V.
CBI COMPANY B.V.
CBI COMPANY TWO B.V.
CHICAGO BRIDGE & IRON COMPANY B.V.
COMET II B.V.
LEALAND FINANCE COMPANY B.V.
LUMMUS TECHNOLOGY B.V.
LUTECH PROJECT SOLUTIONS B.V.
LUTECH PROJECTS B.V.
MCDERMOTT TECHNOLOGY (2), B.V.
MCDERMOTT TECHNOLOGY (3), B.V.
NETHERLANDS OPERATING COMPANY B.V.


By: 

Name: Kevin Hargrove

Title: Attorney

NOVOLEN TECHNOLOGY HOLDINGS C.V.

By: McDermott Technology (3), B.V., acting in its
capacity as general partner


Name: Kevin Hargrove
Title: Attorney

CHICAGO BRIDGE & IRON (ANTILLES) N.V.
MC DERMOTT INTERNATIONAL MARINE
INVESTMENTS N.V.
MC DERMOTT OVERSEAS INVESTMENT CO. N.V.
VARSY INTERNATIONAL N.V.

By: 

Name: Kevin Hargrove

Title: Attorney

SIGNED AND DELIVERED for and on
behalf of and as the deed of **CB & I**
FINANCE COMPANY LIMITED by its
lawfully appointed attorney

KEVIN HARGROVE



in the presence of:

Attorney

(Signature of Witness):

Traci Brown

(Name of Witness):

Traci Brown

(Address of Witness):

757 N. Eldridge Parkway, Houston TX

77079

(Occupation of Witness):


Paralegal



Executed and Delivered as a Deed by
AITON & CO LIMITED

By: 
Name: Kevin Hargrove
Title: Authorised Person

Witnessed 
By: 
Name: Traci Brown
Title: Paralegal

Executed and Delivered as a Deed by
CB&I CONSTRUCTORS LIMITED

By: 
Name: Kevin Hargrove
Title: Authorised Person

Witnessed 
By: 
Name: Traci Brown
Title: Paralegal

Executed and Delivered as a Deed by
CB&I GROUP UK HOLDINGS

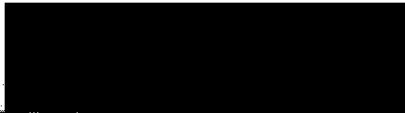
By: 
Name: Kevin Hargrove
Title: Authorised Person

Witnessed 
By: 
Name: Traci Brown
Title: Paralegal

Executed and Delivered as a Deed by
CB&I HOLDINGS (UK) LIMITED

By: 
Name: Kevin Hargrove
Title: Authorised Person

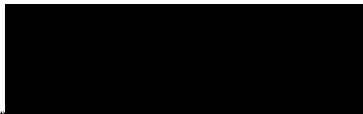
Witnessed 

By: 
Name: Traci Brown
Title: Paralegal

Executed and Delivered as a Deed by
CB&I LONDON

By: 
Name: Kevin Hargrove
Title: Authorised Person

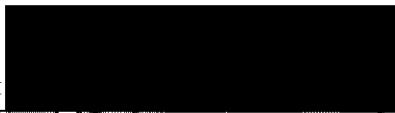
Witnessed 

By: 
Name: Traci Brown
Title: Paralegal


Executed and Delivered as a Deed by
CB&I PADDINGTON LIMITED

By: 
Name: Kevin Hargrove
Title: Authorised Person

Witnessed 

By: 
Name: Traci Brown
Title: Paralegal


Executed and Delivered as a Deed by
CB&I POWER LIMITED

By: 
Name: Kevin Hargrove
Title: Authorised Person

Witnessed 

By: 
Name: Traci Brown
Title: Paralegal

Executed and Delivered as a Deed by
CB&I UK LIMITED

By: 
Name: Kevin Hargrove
Title: Authorised Person

Witnessed 

By: 
Name: Traci Brown
Title: Paralegal

Executed and Delivered as a Deed by
CB&I (US) HOLDINGS, LIMITED

By: 
Name: Kevin Hargrove
Title: Authorised Person

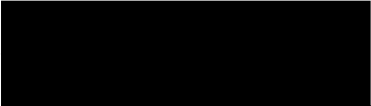
Witnessed 

By: 
Name: Traci Brown
Title: Paralegal

Executed and Delivered as a Deed by
CBI UK CAYMAN ACQUISITION LIMITED

By: 
Name: Kevin Hargrove
Title: Authorised Person


Witnessed

By: 
Name: Traci Brown
Title: Paralegal

Executed and Delivered as a Deed by
LUMMUS CONSULTANTS INTERNATIONAL
LIMITED

By: 
Name: Kevin Hargrove
Title: Authorised Person

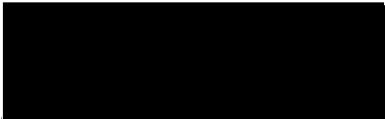
Witnessed

By: 
Name: Traci Brown
Title: Paralegal

Executed and Delivered as a Deed by
LUTECH RESOURCES LIMITED

By: 
Name: Kevin Hargrove
Title: Authorised Person

Witnessed

By: 
Name: Traci Brown
Title: Paralegal

Executed and Delivered as a Deed by
OXFORD METAL SUPPLY LIMITED

By: 

Name: Kevin Hargrove

Title: Authorised Person

Witnessed 

By: 

Name: Traci Brown

Title: Paralegal

Executed and Delivered as a Deed by
PIPEWORK ENGINEERING AND DEVELOPMENTS
LIMITED

By: 

Name: Kevin Hargrove

Title: Authorised Person

Witnessed 

By: 

Name: Traci Brown

Title: Paralegal

Executed and Delivered as a Deed by
SHAW DUNN LIMITED

By: 

Name: Kevin Hargrove

Title: Authorised Person

Witnessed 

By: 

Name: Traci Brown

Title: Paralegal

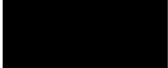
Executed and Delivered as a Deed by
SHAW GROUP UK LIMITED

By: 
Name: Kevin Hargrove
Title: Authorised Person

Witnessed

By: 
Name: Traci Brown
Title: Paralegal

Executed and Delivered as a Deed by
WHESOE PIPING SYSTEMS LIMITED

By: 
Name: Kevin Hargrove
Title: Authorised Person

Witnessed

By: 
Name: Traci Brown
Title: Paralegal


Executed and Delivered as a Deed by
MCDERMOTT HOLDINGS (U.K.) LIMITED


By: 
Name: Kevin Hargrove
Title: Authorised Person

Witnessed 

By: 
Name: Traci Brown
Title: Paralegal

Executed and Delivered as a Deed by
MCDERMOTT MARINE CONSTRUCTION LIMITED

By: 
Name: Kevin Hargrove
Title: Authorised Person

Witnessed 

By: 
Name: Traci Brown
Title: Paralegal

CBI EASTERN ANSTALT

By:



Name: Kevin Hargrove

Title: Authorized Person

J. RAY MCDERMOTT DE MÉXICO, S.A. DE C.V.
MCDERMOTT MARINE MÉXICO, S.A. DE C.V.
SERVICIOS DE FABRICACIÓN DE ALTAMIRA, S.A.
DE C.V.
SERVICIOS PROFESIONALES DE ALTAMIRA, S.A.
DE C.V.
CB&I MATAMOROS, S. DE R. L. DE C.V.

By: 
Name: Kevin Hargrove
Title: Treasurer

CHICAGO BRIDGE DE MÉXICO, S.A. DE C.V.

By: 
Name: Kevin Hargrove
Title: Authorized Person

CB&I NEDERLAND B.V.
CB&I OIL & GAS EUROPE B.V.
LUMMUS TECHNOLOGY HEAT TRANSFER B.V.
LUTECH RESOURCES B.V.

By: 
Name: Kevin Hargrove
Title: Attorney

CHARTERING COMPANY (SINGAPORE) PTE. LTD
J. RAY MCDERMOTT (QINGDAO) PTE. LTD.
MCDERMOTT ASIA PACIFIC PTE. LTD.

By: 

Name: Kevin Hargrove

Title: Assistant Treasurer

CB&I GLOBAL OPERATIONS INTERNATIONAL,
PTE. LTD.

CB&I GLOBAL OPERATIONS US PTE. LTD.

CB&I SINGAPORE PTE. LTD.

By: 

Name: Kevin Hargrove

Title: Authorized Person

CB&I EL DORADO, INC.
CB&I LLC
CHICAGO BRIDGE & IRON COMPANY
J. RAY MCDERMOTT TECHNOLOGY, INC.
LUMMUS GASIFICATION
TECHNOLOGY LICENSING LLC
MCDERMOTT BLACKBIRD HOLDINGS, LLC
MCDERMOTT INVESTMENTS, LLC
OPI VESSELS, INC.
850 PINE STREET LLC
A & B BUILDERS, LTD.
ASIA PACIFIC SUPPLY CO.
ATLANTIC CONTINGENCY
CONSTRUCTORS II, LLC
ATLANTIS CONTRACTORS INC.
CB&I CLEARFIELD, INC.
CB&I CONNECTICUT, INC.
CB&I FINANCIAL RESOURCES LLC
CB&I GLOBAL, L.L.C.
CB&I HOUSTON 06 LLC
CB&I HOUSTON 07 LLC
CB&I HOUSTON 08 LLC
CB&I HOUSTON 09 LLC
CB&I HOUSTON 10 LLC
CB&I HOUSTON 11 LLC
CB&I HOUSTON 12 LLC
CB&I HOUSTON 13 LLC
CB&I HOUSTON LLC
CB&I TYLER LLC
CBI AMERICAS LTD.
CBI OVERSEAS (FAR EAST) INC.
CBI US HOLDING COMPANY INC.
CENTRAL TRADING COMPANY LTD.
HBI HOLDINGS, LLC
CB&I LAURENS, INC.
CB&I NORTH CAROLINA, INC.
CHICAGO BRIDGE & IRON COMPANY
(DELAWARE)

CBI HOLDCO TWO INC.
CONSTRUCTORS INTERNATIONAL, L.L.C.
HOWE-BAKER ENGINEERS, LTD.
HOWE-BAKER HOLDINGS, L.L.C.
HOWE-BAKER INTERNATIONAL
MANAGEMENT, LLC
HOWE-BAKER INTERNATIONAL, L.L.C.
HOWE-BAKER MANAGEMENT, L.L.C.
J. RAY MCDERMOTT SOLUTIONS, INC.
LUMMUS TECHNOLOGY INTERNATIONAL
LLC
LUMMUS TECHNOLOGY LLC
LUMMUS TECHNOLOGY OVERSEAS LLC
LUMMUS TECHNOLOGY SERVICES LLC
LUMMUS TECHNOLOGY VENTURES LLC
MATRIX ENGINEERING, LTD.
MATRIX MANAGEMENT SERVICES, LLC
MCDERMOTT ENGINEERING, LLC
MCDERMOTT SUBSEA ENGINEERING, INC.
NUCLEAR ENERGY HOLDINGS, L.L.C.
PROSPECT INDUSTRIES (HOLDINGS) INC.
SHAW CONNEX, INC.
SHAW INTERNATIONAL INC.
SHAW TRANSMISSION & DISTRIBUTION
SERVICES INTERNATIONAL, INC.
SPARTEC, INC.
TVL LENDER II, INC.
CB&I PROJECT SERVICES GROUP, LLC
CBI OVERSEAS, LLC
LUTECH RESOURCES INC.
MCDERMOTT TECHNOLOGY, LLC

By: 
Name: Kevin Hargrove
Title: Treasurer

J. RAY MCDERMOTT HOLDINGS, LLC
MCDERMOTT FINANCE L.L.C.

By: 
Name: Kevin Hargrove
Title: Vice President, Treasurer

MCDERMOTT SERVIÇOS OFFSHORE DO BRASIL
LTDA.

By:

Name: Kevin Hargrove

Title: Attorney

ARABIAN CBI CO. LTD.
ARABIAN CBI TANK MANUFACTURING CO. LTD.
LUMMUS ARABIA LTD. CO.

By: 

Name: Kevin Hargrove

Title: Authorized Person

MCDERMOTT EASTERN HEMISPHERE, LTD.

By: 
Name: Kevin Hargrove
Title: Treasurer

Executed by **McDermott Australia Pty. Ltd.**
ACN 002 736 352 in accordance with section
127(1) of the Corporations Act 2001 (Cth) by
authority of its directors:



Signature of director

VASSILY CALLISEROS

Name of director (print)



Signature of director/company secretary

G. DEACON POWELL

Name of director/company secretary (print)

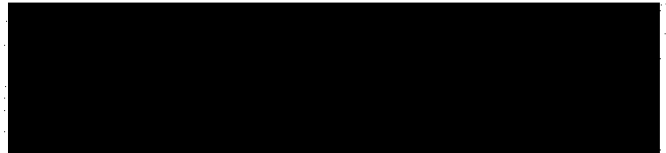
Executed by **J. Ray McDermott (Aust.)**
Holding Pty. Limited. ACN 002 797 668 in
accordance with section 127(1) of the
Corporations Act 2001 (Cth) by authority of its
directors:



Signature of director

VASSILY CALLISEROS

Name of director (print)



Signature of director/company secretary

G. DEACON POWELL

Name of director/company secretary (print)

Executed by **CBI Constructors Pty Ltd ACN**
000 612 411 in accordance with section 127(1)
of the Corporations Act 2001 (Cth) by authority
of its directors:



Signature of director

VASSILY CALLISEROS

Name of director (print)



Signature of director/company secretary

G. DEACON POWELL

Name of director/company secretary (print)

**CRÉDIT AGRICOLE CORPORATE AND
INVESTMENT BANK,**
as Collateral Agent

By: _____

Name:

Ronald E. Spitzer

Title:

Managing Director

By: _____

Name:

Vuny A. Tsyganov

Title:

Director

SCHEDULE 4.3
TO PLEDGE AND SECURITY AGREEMENT

PERFECTED FIRST PRIORITY LIENS

UCC Filings

A UCC1 Financing Statement listing each Grantor, as debtor, and the Collateral Agent, as secured party, should be filed, to the extent not already on file, in the applicable governmental offices set forth below. Each such UCC1 Financing Statement will need to include a description of the Collateral that complies with Section 9-504 of the Uniform Commercial Code.

Grantor	Jurisdiction of Filing
CHARTERING COMPANY (SINGAPORE) PTE. LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds
EASTERN MARINE SERVICES, INC.	Texas Secretary of State Washington, D.C. Recorder of Deeds
HYDRO MARINE SERVICES, INC.	Texas Secretary of State Washington, D.C. Recorder of Deeds
J. RAY HOLDINGS, INC.	Delaware Secretary of State
J. RAY MCDERMOTT (AUST.) HOLDING PTY. LIMITED	Texas Secretary of State Washington, D.C. Recorder of Deeds
J. RAY MCDERMOTT DE MEXICO, S.A. DE C.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
J. RAY MCDERMOTT FAR EAST, INC.	Texas Secretary of State Washington, D.C. Recorder of Deeds
J. RAY MCDERMOTT HOLDINGS, LLC	Delaware Secretary of State
J. RAY MCDERMOTT INTERNATIONAL, INC.	Texas Secretary of State Washington, D.C. Recorder of Deeds
J. RAY MCDERMOTT INTERNATIONAL VESSELS, LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds
J. RAY MCDERMOTT (NORWAY), AS	Texas Secretary of State Washington, D.C. Recorder of Deeds
J. RAY MCDERMOTT (QINGDAO) PTE. LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds
J. RAY MCDERMOTT, S. A.	Texas Secretary of State Washington, D.C. Recorder of Deeds
J. RAY MCDERMOTT SOLUTIONS, INC.	Delaware Secretary of State
J. RAY MCDERMOTT TECHNOLOGY, INC.	Delaware Secretary of State
J. RAY MCDERMOTT UNDERWATER SERVICES, INC.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT (AMAZON CHARTERING), INC.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT ASIA PACIFIC PTE. LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds

Grantor	Jurisdiction of Filing
MCDERMOTT AUSTRALIA PTY. LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT BLACKBIRD HOLDINGS, LLC	Delaware Secretary of State
MCDERMOTT CASPIAN CONTRACTORS, INC.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT CAYMAN LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT ENGINEERING, LLC	Texas Secretary of State
MCDERMOTT FINANCE L.L.C.	Delaware Secretary of State
MCDERMOTT GULF OPERATING COMPANY, INC.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT HOLDINGS (U.K.) LIMITED	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT, INC.	Delaware Secretary of State
MCDERMOTT INTERNATIONAL, INC.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT INTERNATIONAL INVESTMENTS CO., INC.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MC DERMOTT INTERNATIONAL MARINE INVESTMENTS N.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT INTERNATIONAL MANAGEMENT, S. DE RL.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT INTERNATIONAL TRADING CO., INC.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT INTERNATIONAL VESSELS, INC.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT INVESTMENTS, LLC	Delaware Secretary of State
MCDERMOTT MARINE CONSTRUCTION LIMITED	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT MARINE MEXICO, S.A. DE C.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT MIDDLE EAST, INC.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT OFFSHORE SERVICES COMPANY, INC.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT OLD JV OFFICE, INC.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT OVERSEAS, INC.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MC DERMOTT OVERSEAS INVESTMENT CO. N.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT SUBSEA ENGINEERING, INC.	Delaware Secretary of State

Grantor	Jurisdiction of Filing
MCDERMOTT SUBSEA, INC.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT TECHNOLOGY (AMERICAS), INC.	Delaware Secretary of State
MCDERMOTT TECHNOLOGY (US), INC.	Delaware Secretary of State
MCDERMOTT TECHNOLOGY, B.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT TECHNOLOGY (2), B.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT TECHNOLOGY (3), B.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
NORTH ATLANTIC VESSEL, INC.	Texas Secretary of State Washington, D.C. Recorder of Deeds
OFFSHORE PIPELINES INTERNATIONAL, LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds
OPI VESSELS, INC.	Delaware Secretary of State
SERVICIOS DE FABRICACION DE ALTAMIRA, S.A. DE C.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
SERVICIOS PROFESIONALES DE ALTAMIRA, S.A. DE C.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
SPARTEC, INC.	Delaware Secretary of State
VARSY INTERNATIONAL N.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
850 PINE STREET LLC	Delaware Secretary of State
A & B BUILDERS, LTD.	Texas Secretary of State
AITON & CO LIMITED	Texas Secretary of State Washington, D.C. Recorder of Deeds
ARABIAN CBI CO. LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds
ARABIAN CBI TANK MANUFACTURING CO. LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds
ASIA PACIFIC SUPPLY CO.	Delaware Secretary of State
ATLANTIC CONTINGENCY CONSTRUCTORS II, LLC	Delaware Secretary of State
ATLANTIS CONTRACTORS INC.	Delaware Secretary of State
CATALYTIC DISTILLATION TECHNOLOGIES	Texas Secretary of State
CB&I BRAZIL HOLDINGS, INC.	Any Parish in Louisiana
CB&I CANADA LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds

Grantor	Jurisdiction of Filing
CB&I CLEARFIELD, INC.	Delaware Secretary of State
CB&I COJAFEX B.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
CB&I CONNECTICUT, INC.	Delaware Secretary of State
CB&I CONSTRUCTORS LIMITED	Texas Secretary of State Washington, D.C. Recorder of Deeds
CB&I EL DORADO, INC.	Arkansas Secretary of State
CB&I ENERGY SERVICES, LLC	Any Parish in Louisiana
CB&I EUROPE B.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
CB&I FABRICATION, LLC	Any Parish in Louisiana
CB & I FINANCE COMPANY LIMITED	Texas Secretary of State Washington, D.C. Recorder of Deeds
CB&I FINANCIAL RESOURCES LLC	Delaware Secretary of State
CB&I GLOBAL OPERATIONS INTERNATIONAL PTE. LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds
CB&I GLOBAL OPERATIONS US PTE. LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds
CB&I GLOBAL, L.L.C.	Delaware Secretary of State
CB&I GROUP UK HOLDINGS	Texas Secretary of State Washington, D.C. Recorder of Deeds
CB&I GROUP INC.	Any Parish in Louisiana
CB&I HOLDCO INTERNATIONAL, LLC	Any Parish in Louisiana
CB&I HOLDCO, LLC	Any Parish in Louisiana
CB&I HOLDINGS (UK) LIMITED	Texas Secretary of State Washington, D.C. Recorder of Deeds
CB&I HOLDINGS B.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
CB&I HOUSTON 06 LLC	Delaware Secretary of State
CB&I HOUSTON 07 LLC	Delaware Secretary of State
CB&I HOUSTON 08 LLC	Delaware Secretary of State
CB&I HOUSTON 09 LLC	Delaware Secretary of State
CB&I HOUSTON 10 LLC	Delaware Secretary of State

Grantor	Jurisdiction of Filing
CB&I HOUSTON 11 LLC	Delaware Secretary of State
CB&I HOUSTON 12 LLC	Delaware Secretary of State
CB&I HOUSTON 13 LLC	Delaware Secretary of State
CB&I HOUSTON LLC	Delaware Secretary of State
CB&I INTERNATIONAL ONE, LLC	Any Parish in Louisiana
CB&I INTERNATIONAL, INC.	Any Parish in Louisiana
CB&I INTERNATIONAL, LLC	Any Parish in Louisiana
CB&I LAKE CHARLES, L.L.C.	Any Parish in Louisiana
CB&I LAURENS, INC.	South Carolina Secretary of State
CB&I LLC	Texas Secretary of State
CB&I LONDON	Texas Secretary of State Washington, D.C. Recorder of Deeds
CB&I MATAMOROS, S. DE R.L. DE C.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
CB&I MIDDLE EAST HOLDING, INC.	Texas Secretary of State Washington, D.C. Recorder of Deeds
CB&I NEDERLAND B.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
CB&I NORTH CAROLINA, INC.	North Carolina Secretary of State
CB&I OFFSHORE SERVICES, INC.	Any Parish in Louisiana
CB&I OIL & GAS EUROPE B.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
CB&I PADDINGTON LIMITED	Texas Secretary of State Washington, D.C. Recorder of Deeds
CB&I POWER COMPANY B.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
CB&I POWER INTERNATIONAL, INC.	Any Parish in Louisiana
CB&I POWER LIMITED	Texas Secretary of State Washington, D.C. Recorder of Deeds
CB&I POWER, LLC	Any Parish in Louisiana
CB&I PROJECT SERVICES GROUP, LLC	Delaware Secretary of State
CB&I RIO GRANDE HOLDINGS, L.L.C.	Any Parish in Louisiana

Grantor	Jurisdiction of Filing
CB&I RIO GRANDE VALLEY FABRICATION & MANUFACTURING, L.L.C.	Any Parish in Louisiana
CB&I RUSLAND B.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
CB&I SINGAPORE PTE. LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds
CB&I STORAGE TANK SOLUTIONS LLC	Delaware Secretary of State
CB&I STS DELAWARE LLC	Delaware Secretary of State
CB&I STS HOLDINGS LLC	Delaware Secretary of State
CB&I TYLER LLC	Delaware Secretary of State
CB&I UK LIMITED	Texas Secretary of State Washington, D.C. Recorder of Deeds
CB&I WALKER LA, L.L.C.	Any Parish in Louisiana
CBI AMERICAS LTD.	Delaware Secretary of State
CBI COMPANY B.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
CBI COMPANY LTD.	Delaware Secretary of State
CBI COMPANY TWO B.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
CBI CONSTRUCTORS PTY. LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds
CBI EASTERN ANSTALT	Texas Secretary of State Washington, D.C. Recorder of Deeds
CBI HOLDCO TWO INC.	Delaware Secretary of State
CBI OVERSEAS (FAR EAST) INC.	Delaware Secretary of State
CBI OVERSEAS, LLC	Delaware Secretary of State
CBI PANAMA, S.A.	Texas Secretary of State Washington, D.C. Recorder of Deeds
CBI SERVICES, LLC	Delaware Secretary of State
CBI UK CAYMAN ACQUISITION LIMITED	Texas Secretary of State Washington, D.C. Recorder of Deeds
CBI US HOLDING COMPANY INC.	Delaware Secretary of State
CENTRAL TRADING COMPANY LTD.	Delaware Secretary of State
CHEMICAL RESEARCH & LICENSING, LLC	Texas Secretary of State

Grantor	Jurisdiction of Filing
CHICAGO BRIDGE & IRON (ANTILLES) N.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
CHICAGO BRIDGE & IRON COMPANY	Delaware Secretary of State
CHICAGO BRIDGE & IRON COMPANY	Illinois Secretary of State
CHICAGO BRIDGE & IRON COMPANY (DELAWARE)	Delaware Secretary of State
CHICAGO BRIDGE & IRON COMPANY B.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
CHICAGO BRIDGE DE MÉXICO, S.A. DE C.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
COMET II B.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
CONSTRUCTORS INTERNATIONAL, L.L.C.	Delaware Secretary of State
CSA TRADING COMPANY LTD.	Delaware Secretary of State
EDS EQUIPMENT COMPANY, LLC	Delaware Secretary of State
ENVIRONMENTAL SOLUTIONS (CAYMAN) LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds
ENVIRONMENTAL SOLUTIONS HOLDING LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds
ENVIRONMENTAL SOLUTIONS LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds
HBI HOLDINGS, LLC	Delaware Secretary of State
HIGHLAND TRADING COMPANY, LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds
HORTON CBI, LIMITED	Texas Secretary of State Washington, D.C. Recorder of Deeds
HOWE-BAKER ENGINEERS, LTD.	Texas Secretary of State
HOWE-BAKER HOLDINGS, L.L.C.	Delaware Secretary of State
HOWE-BAKER INTERNATIONAL MANAGEMENT, LLC	Delaware Secretary of State
HOWE-BAKER INTERNATIONAL, L.L.C.	Delaware Secretary of State
HOWE-BAKER MANAGEMENT, L.L.C.	Delaware Secretary of State
INTERNATIONAL CONSULTANTS, L.L.C.	Any Parish in Louisiana
LEALAND FINANCE COMPANY B.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
LUMMUS ARABIA LTD. CO.	Texas Secretary of State Washington, D.C. Recorder of Deeds

Grantor	Jurisdiction of Filing
LUMMUS CONSULTANTS INTERNATIONAL LIMITED	Texas Secretary of State Washington, D.C. Recorder of Deeds
LUMMUS CONSULTANTS INTERNATIONAL LLC	Any Parish in Louisiana
LUMMUS GASIFICATION TECHNOLOGY LICENSING LLC	Delaware Secretary of State
LUMMUS TECHNOLOGY VENTURES LLC	Delaware Secretary of State
LUMMUS TECHNOLOGY B.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
LUMMUS TECHNOLOGY HEAT TRANSFER B.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
LUMMUS TECHNOLOGY INTERNATIONAL LLC	Delaware Secretary of State
LUMMUS TECHNOLOGY OVERSEAS LLC	Delaware Secretary of State
LUMMUS TECHNOLOGY SERVICES LLC	Delaware Secretary of State
LUMMUS TECHNOLOGY LLC	Delaware Secretary of State
LUTECH PROJECT SOLUTIONS B.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
LUTECH PROJECTS B.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
LUTECH RESOURCES B.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
LUTECH RESOURCES CANADA LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds
LUTECH RESOURCES INC.	Delaware Secretary of State
LUTECH RESOURCES LIMITED	Texas Secretary of State Washington, D.C. Recorder of Deeds
MATRIX ENGINEERING, LTD.	Texas Secretary of State
MATRIX MANAGEMENT SERVICES, LLC	Delaware Secretary of State
NETHERLANDS OPERATING COMPANY B.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
NOVOLEN TECHNOLOGY HOLDINGS C.V.	Texas Secretary of State Washington, D.C. Recorder of Deeds
NUCLEAR ENERGY HOLDINGS, L.L.C.	Delaware Secretary of State
OASIS SUPPLY COMPANY, LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds
OCEANIC CONTRACTORS, INC.	Delaware Secretary of State
OXFORD METAL SUPPLY LIMITED	Texas Secretary of State Washington, D.C. Recorder of Deeds

Grantor	Jurisdiction of Filing
PIKE PROPERTIES II, INC.	Any Parish in Louisiana
PIPEWORK ENGINEERING AND DEVELOPMENTS LIMITED	Texas Secretary of State Washington, D.C. Recorder of Deeds
PROSPECT INDUSTRIES (HOLDINGS) INC.	Delaware Secretary of State
S C WOODS, L.L.C.	Delaware Secretary of State
SHAW BENECO, INC.	Any Parish in Louisiana
SHAW CONNEX, INC.	Delaware Secretary of State
SHAW DUNN LIMITED	Texas Secretary of State Washington, D.C. Recorder of Deeds
SHAW E & I INTERNATIONAL LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds
SHAW ENERGY SERVICES, INC.	Any Parish in Louisiana
SHAW FABRICATORS, INC.	Any Parish in Louisiana
SHAW FAR EAST SERVICES, LLC	Any Parish in Louisiana
SHAW GROUP UK LIMITED	Texas Secretary of State Washington, D.C. Recorder of Deeds
SHAW HOME LOUISIANA, LLC	Any Parish in Louisiana
SHAW INTERNATIONAL INC.	Delaware Secretary of State
SHAW INTERNATIONAL MANAGEMENT SERVICES TWO, INC.	Any Parish in Louisiana
SHAW JV HOLDINGS, L.L.C.	Any Parish in Louisiana
SHAW MANAGED SERVICES, LLC	Any Parish in Louisiana
SHAW MANAGEMENT SERVICES ONE, INC.	Any Parish in Louisiana
SHAW NC COMPANY, INC.	North Carolina Secretary of State
SHAW NUCLEAR ENERGY HOLDINGS (UK), INC.	Any Parish in Louisiana
SHAW OVERSEAS (MIDDLE EAST) LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds
SHAW POWER DELIVERY SYSTEMS, INC.	Any Parish in Louisiana
SHAW POWER SERVICES GROUP, L.L.C.	Any Parish in Louisiana
SHAW POWER SERVICES, LLC	Any Parish in Louisiana

Grantor	Jurisdiction of Filing
SHAW POWER TECHNOLOGIES, INC.	Any Parish in Louisiana
SHAW PROCESS FABRICATORS, INC.	Any Parish in Louisiana
SHAW SERVICES, L.L.C.	Any Parish in Louisiana
SHAW SSS FABRICATORS, INC.	Any Parish in Louisiana
SHAW TRANSMISSION & DISTRIBUTION SERVICES INTERNATIONAL, INC.	Delaware Secretary of State
SHAW TRANSMISSION & DISTRIBUTION SERVICES, INC.	Any Parish in Louisiana
TVL LENDER II, INC.	Delaware Secretary of State
WHESOE PIPING SYSTEMS LIMITED	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT SERVIÇOS OFFSHORE DO BRASIL LTDA.	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT TECHNOLOGY, LLC	Delaware Secretary of State
CB&I (US) HOLDINGS, LIMITED	Texas Secretary of State Washington, D.C. Recorder of Deeds
MCDERMOTT EASTERN HEMISPHERE, LTD.	Texas Secretary of State Washington, D.C. Recorder of Deeds

To perfect the Lien in Commercial Tort Claims, a UCC1 Financing Statement listing the applicable Grantor, as debtor, and the Collateral Agent, as secured party, should be filed in the applicable governmental offices set forth above. Each such UCC1 Financing Statement will need to include a description of the Commercial Tort Claims that complies with Section 9-108 of the Uniform Commercial Code.

To perfect the Lien in As-Extracted Collateral, a UCC1 Financing Statement listing the applicable Grantor, as debtor, and the Collateral Agent, as secured party, should be filed, to the extent not already on file, in the real property records of the county in which such As-Extracted Collateral is located. Each such UCC1 Financing Statement will need to include a legal description of the real property upon (or under) which such As-Extracted Collateral is located.

Actions with respect to Pledged Securities

The original of all Pledged Securities evidenced by either a Certificated Security or Instrument should be delivered to the Collateral Agent, together with an undated stock or note power, as applicable, duly executed in blank by the applicable Grantor, in each case to the extent not already in the possession of the Collateral Agent.

Actions with respect to Patents and Trademarks

For Collateral consisting of Patents and Trademarks, the applicable Grantors should execute an Intellectual Property Security Agreement, and such agreement should be recorded with the United States Patent and Trademark Office, to the extent such Collateral is not already covered by an applicable Intellectual Property Security Agreement recorded with the United States Patent and Trademark Office.

Actions with respect to Copyrights

For Collateral consisting of Copyrights, the applicable Grantors should execute an Intellectual Property Security Agreement, and such agreement should be recorded with the United States Copyright Office, to the extent such Collateral is not already covered by an applicable Intellectual Property Security Agreement recorded with the United States Copyright Office.

Actions with respect to Deposit Accounts and Securities Accounts

For Collateral consisting of Deposit Accounts or Securities Accounts that constitute Material Accounts, the applicable Grantors should execute and deliver, together with the applicable Securities Intermediary or depository institution, and the Collateral Agent, an agreement granting control to the Collateral Agent over such Collateral.

SCHEDULE 4.4
TO PLEDGE AND SECURITY AGREEMENT

NAME; JURISDICTION OF ORGANIZATION, ETC.

<u>Exact Legal Name of Grantor</u>	<u>Type of Organization</u>	<u>Jurisdiction of Organization</u>	<u>Organizational Id. Number</u>	<u>Chief Executive Office</u>
CHARTERING COMPANY (SINGAPORE) PTE. LTD.	Corporation	Singapore	198105837N	Level 24 Menara Hap Seng 2, No. 1 Jalan P. Ramlee Kuala Lumpur 500250 Malaysia
EASTERN MARINE SERVICES, INC.	Corporation	Panama	10582-250-107880	Jebel Ali Free Trade Zone P. O. Box 16961 Dubai, U.A.E.
HYDRO MARINE SERVICES, INC.	Corporation	Panama	10584-168-107906	Jebel Ali Free Trade Zone P. O. Box 16961 Dubai, U.A.E.
J. RAY HOLDINGS, INC.	Corporation	Delaware	4794045	757 N. Eldridge Parkway Houston, TX 77079-4435
J. RAY MCDERMOTT (AUST.) HOLDING PTY. LIMITED	Corporation	Australia	ACN 002 797 668	Level 4, Australia Place 15-17 William Street Perth, WA, 6000
J. RAY MCDERMOTT DE MEXICO, S.A. DE C.V.	Corporation	Mexico	261797	757 N. Eldridge Parkway Houston, TX 77079-4435
J. RAY MCDERMOTT FAR EAST, INC.	Corporation	Panama	45085-0135-29859	Level 24 Menara Hap Seng 2, No. 1 Jalan P. Ramlee Kuala Lumpur 500250 Malaysia
J. RAY MCDERMOTT HOLDINGS, LLC	Limited Liability Company	Delaware	2405679	757 N. Eldridge Parkway Houston, TX 77079-4435
J. RAY MCDERMOTT INTERNATIONAL, INC.	Corporation	Panama	45008-104-29824	757 N. Eldridge Parkway Houston, TX 77079-4435
J. RAY MCDERMOTT INTERNATIONAL VESSELS, LTD.	Exempted Company	Cayman Islands	36846	757 N. Eldridge Parkway Houston, TX 77079-4435
J. RAY MCDERMOTT (NORWAY), AS	Limited Company	Norway	994685171	Global House 1 Ashley Avenue Epsom, Surrey KT17 1JG Great Britain
J. RAY MCDERMOTT (QINGDAO) PTE. LTD.	Corporation	Singapore	2008096270	Level 24 Menara Hap Seng 2, No. 1 Jalan P. Ramlee Kuala Lumpur 500250 Malaysia
J. RAY MCDERMOTT, S. A.	Corporation	Panama	41755-0048-285156	757 N. Eldridge Parkway Houston, TX 77079-4435
J. RAY MCDERMOTT SOLUTIONS, INC.	Corporation	Delaware	2608070	757 N. Eldridge Parkway Houston, TX 77079-4435
J. RAY MCDERMOTT TECHNOLOGY, INC.	Corporation	Delaware	2318840	757 N. Eldridge Parkway Houston, TX 77079-4435

<u>Exact Legal Name of Grantor</u>	<u>Type of Organization</u>	<u>Jurisdiction of Organization</u>	<u>Organizational Id. Number</u>	<u>Chief Executive Office</u>
J. RAY MCDERMOTT UNDERWATER SERVICES, INC.	Corporation	Panama	45466-0002-300146	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT (AMAZON CHARTERING), INC.	Corporation	Panama	155643161-2-2017	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT ASIA PACIFIC PTE. LTD.	Corporation	Singapore	197900805R	Level 24 Menara Hap Seng 2, No. 1 Jalan P. Ramlee Kuala Lumpur 500250 Malaysia
MCDERMOTT AUSTRALIA PTY. LTD.	Corporation	Australia	ACN 002 736 352	Level 4, Australia Place 15-17 William StreetPerth, WA 6000
MCDERMOTT BLACKBIRD HOLDINGS, LLC	Limited Liability Company	Delaware	5666492	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT CASPIAN CONTRACTORS, INC.	Corporation	Panama	58699-24-342452	Jebel Ali Free Trade Zone P. O. Box 16961 Dubai, U.A.E.
MCDERMOTT CAYMAN LTD.	Exempted Company	Cayman Islands	142780	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT ENGINEERING, LLC	Limited Liability Company	Texas	0701741222	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT FINANCE L.L.C.	Limited Liability Company	Delaware	5506751	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT GULF OPERATING COMPANY, INC.	Corporation	Panama	18346-0146-170586	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT HOLDINGS (U.K.) LIMITED	Corporation	England	02576807	Global House 1 Ashley Avenue Epsom, Surrey KT17 1JG Great Britain
MCDERMOTT, INC.	Corporation	Delaware	2067443	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT INTERNATIONAL, INC.	Corporation	Panama	372-216-81615	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT INTERNATIONAL INVESTMENTS CO., INC.	Corporation	Panama	10192-234-104300	757 N. Eldridge Parkway Houston, TX 77079-4435
MC DERMOTT INTERNATIONAL MARINE INVESTMENTS N.V.	Corporation	Curacao	40455	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT INTERNATIONAL MANAGEMENT, S. DE RL.	Limited Liability Company	Panama	2388877-1-2244	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT INTERNATIONAL TRADING CO., INC.	Corporation	Panama	10199-53-104382	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT INTERNATIONAL VESSELS, INC.	Corporation	Panama	1143442-1-570106	757 N. Eldridge Parkway Houston, TX 77079-4435

<u>Exact Legal Name of Grantor</u>	<u>Type of Organization</u>	<u>Jurisdiction of Organization</u>	<u>Organizational Id. Number</u>	<u>Chief Executive Office</u>
MCDERMOTT INVESTMENTS, LLC	Limited Liability Company	Delaware	040213	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT MARINE CONSTRUCTION LIMITED	Corporation	England	02869047	Global House 1 Ashley Avenue Epsom, Surrey KT17 1JG Great Britain
MCDERMOTT MARINE MEXICO, S.A. DE C.V.	Corporation	Mexico	384034	Ave Paseo De La Reforma No.505, Piso 17 Col. Cuauhtemoc C.P. 06500, Mexico, D.F.
MCDERMOTT MIDDLE EAST, INC.	Corporation	Panama	13523-45-133005	Jebel Ali Free Trade Zone P. O. Box 16961 Dubai, U.A.E.
MCDERMOTT OFFSHORE SERVICES COMPANY, INC.	Corporation	Panama	13523-23-133004	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT OLD JV OFFICE, INC.	Corporation	Panama	25986-0159-22173	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT OVERSEAS, INC.	Corporation	Panama	372-586-83594	757 N. Eldridge Parkway Houston, TX 77079-4435
MC DERMOTT OVERSEAS INVESTMENT CO. N.V.	Corporation	Curacao	39499	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT SUBSEA ENGINEERING, INC.	Corporation	Delaware	2412089	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT SUBSEA, INC.	Corporation	Panama	41749-0085-285119	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT TECHNOLOGY (AMERICAS), INC.	Corporation	Delaware	6662560	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT TECHNOLOGY (US), INC.	Corporation	Delaware	6662557	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT TECHNOLOGY, B.V.	Private Company with Limited Liability	Netherlands	70303770	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT TECHNOLOGY (2), B.V.	Private Company with Limited Liability	Netherlands	70542767	757 N. Eldridge Parkway Houston, TX 77079-4435
MCDERMOTT TECHNOLOGY (3), B.V.	Private Company with Limited Liability	Netherlands	70588538	757 N. Eldridge Parkway Houston, TX 77079-4435
NORTH ATLANTIC VESSEL, INC.	Corporation	Panama	29346-51-23486	Level 24 Menara Hap Seng 2, No. 1 Jalan P. Ramlee Kuala Lumpur 500250 Malaysia
OFFSHORE PIPELINES INTERNATIONAL, LTD.	Exempted Company	Cayman Islands	33268	757 N. Eldridge Parkway Houston, TX 77079-4435

<u>Exact Legal Name of Grantor</u>	<u>Type of Organization</u>	<u>Jurisdiction of Organization</u>	<u>Organizational Id. Number</u>	<u>Chief Executive Office</u>
OPI VESSELS, INC.	Corporation	Delaware	2295187	757 N. Eldridge Parkway Houston, TX 77079-4435
SERVICIOS DE FABRICACION DE ALTAMIRA, S.A. DE C.V.	Corporation	Mexico	376939	757 N. Eldridge Parkway Houston, TX 77079-4435
SERVICIOS PROFESIONALES DE ALTAMIRA, S.A. DE C.V.	Corporation	Mexico	375962	757 N. Eldridge Parkway Houston, TX 77079-4435
SPARTEC, INC.	Corporation	Delaware	2534049	757 N. Eldridge Parkway Houston, TX 77079-4435
VARSY INTERNATIONAL N.V.	Corporation	Curacao	36722	757 N. Eldridge Parkway Houston, TX 77079-4435
850 PINE STREET LLC	Limited Liability Company	Delaware	4145318	757 N. Eldridge Parkway Houston, TX 77079-4435
A & B BUILDERS, LTD.	Corporation	Texas	12398410	5324 Gorman Rd, Beaumont, Texas 77705, United States
AITON & CO LIMITED	Private Limited Company	England	3573344	40 Eastbourne Terrace, London, W2 6LG, England
ARABIAN CBI CO. LTD.	Limited Liability Partnership	Saudi Arabia	2050004136	3rd Floor Sadat Tower, Dammam-Khobar Highway, Al Khobar, Saudi Arabia 31952, Saudi Arabia
ARABIAN CBI TANK MANUFACTURING CO. LTD.	Limited Liability Company	Saudi Arabia	2050001809	3rd Floor Sadat Tower, Dammam-Khobar Highway, Al Khobar, Saudi Arabia 31952, Saudi Arabia
ASIA PACIFIC SUPPLY CO.	Corporation	Delaware	2056649	1501 N. Division Plainfield, IL 60544
ATLANTIC CONTINGENCY CONSTRUCTORS II, LLC	Limited Liability Company	Delaware	5192039	757 N. Eldridge Parkway Houston, TX 77079-4435
ATLANTIS CONTRACTORS INC.	Corporation	Delaware	787315	1501 North Division Street, Plainfield, Illinois 60544
CATALYTIC DISTILLATION TECHNOLOGIES	General Partnership	Texas	N/A	10100 Bay Area Blvd. Pasadena, TX 77507
CB&I BRAZIL HOLDINGS, INC.	Corporation	Louisiana	36743910D	2370 Towne Centre Baton Rouge, LA 70806
CB&I CANADA LTD.	Corporation	Canada (British Columbia)	BC0908595	2900-550 Burrard St. Vancouver V6C 0A3
CB&I CLEARFIELD, INC.	Corporation	Delaware	87-0492102	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I COJAFEX B.V.	Private Company with Limited Liability	Netherlands	24098095	Prinses Beatrixlaan 35 2595 AK The Hague The Netherlands
CB&I CONNECTICUT, INC.	Corporation	Delaware	6385692	757 N. Eldridge Parkway Houston, TX 77079-4435

<u>Exact Legal Name of Grantor</u>	<u>Type of Organization</u>	<u>Jurisdiction of Organization</u>	<u>Organizational Id. Number</u>	<u>Chief Executive Office</u>
CB&I CONSTRUCTORS LIMITED	Private Limited Company	England	541526	40 Eastbourne Terrace London W2 6LG
CB&I EL DORADO, INC.	Corporation	Arkansas	71-0561174	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I ENERGY SERVICES, LLC	Limited Liability Company	Louisiana	34108159D	10404 Twin Port Rd. Delcambre, LA 70528
CB&I EUROPE B.V.	Private Company with Limited Liability	Netherlands	34104810	Prinses Beatrixlaan 35 2595 AK The Hague The Netherlands
CB&I FABRICATION, LLC	Limited Liability Company	Louisiana	30-065-2230	2370 Towne Centre Baton Rouge, LA 70806
CB & I FINANCE COMPANY LIMITED	Limited Company	Ireland	374864	10 Earlsfort Terrace Dublin2 Ireland
CB&I FINANCIAL RESOURCES LLC	Limited Liability Company	Delaware	5365346	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I GLOBAL OPERATIONS INTERNATIONAL PTE. LTD.	Private Limited Company	Singapore	201410525H	Level 24 Menara Hap Seng 2, No. 1 Jalan P. Ramlee Kuala Lumpur 500250 Malaysia
CB&I GLOBAL OPERATIONS US PTE. LTD.	Private Limited Company	Singapore	201410486C	Level 24 Menara Hap Seng 2, No. 1 Jalan P. Ramlee Kuala Lumpur 500250 Malaysia
CB&I GLOBAL, L.L.C.	Limited Liability Company	Delaware	3768472	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I GROUP UK HOLDINGS	Unlimited Liability Company	England	3465918	30 Eastbourne Terrace London W2 6LG
CB&I GROUP INC.	Corporation	Louisiana	34245099D	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I HOLDCO INTERNATIONAL, LLC	Limited Liability Company	Louisiana	42059155K	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I HOLDCO, LLC	Limited Liability Company	Louisiana	42059149K	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I HOLDINGS (UK) LIMITED	Private Limited Company	England	02613906	40 Eastbourne Terrace London W2 6LG
CB&I HOLDINGS B.V.	Private Company with Limited	Netherlands	34270030	Prinses Beatrixlaan 35 2595 AK The Hague The Netherlands

<u>Exact Legal Name of Grantor</u>	<u>Type of Organization</u>	<u>Jurisdiction of Organization</u>	<u>Organizational Id. Number</u>	<u>Chief Executive Office</u>
	Liability			
CB&I HOUSTON 06 LLC	Limited Liability Company	Delaware	3994135	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I HOUSTON 07 LLC	Limited Liability Company	Delaware	3994139	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I HOUSTON 08 LLC	Limited Liability Company	Delaware	3994142	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I HOUSTON 09 LLC	Limited Liability Company	Delaware	3994148	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I HOUSTON 10 LLC	Limited Liability Company	Delaware	3994150	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I HOUSTON 11 LLC	Limited Liability Company	Delaware	3994153	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I HOUSTON 12 LLC	Limited Liability Company	Delaware	3994156	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I HOUSTON 13 LLC	Limited Liability Company	Delaware	3994159	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I HOUSTON LLC	Limited Liability Company	Delaware	3986105	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I INTERNATIONAL ONE, LLC	Limited Liability Company	Louisiana	40858640K	2370 Towne Centre Blvd., Baton Rouge, Louisiana 70806, United States
CB&I INTERNATIONAL, INC.	Corporation	Louisiana	72-1237437	2370 Towne Centre Blvd., Baton Rouge, Louisiana 70806, United States
CB&I INTERNATIONAL, LLC	Limited Liability Company	Louisiana	42059158K	2370 Towne Centre Blvd., Baton Rouge, Louisiana 70806, United States
CB&I LAKE CHARLES, L.L.C.	Limited Liability Company	Louisiana	26-1193463	2370 Towne Centre Blvd., Baton Rouge, Louisiana 70806, United States
CB&I LAURENS, INC.	Corporation	South Carolina	163482	366 Old Airport Road, Laurens, South Carolina 29360-7636, United States
CB&I LLC	Limited Liability Company	Texas	802491380	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I LONDON	Private Limited Company	England	5064097	30 Eastbourne Terrace, London W2 6LG England

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CB&I MATAMOROS, S. DE R.L. DE C.V.	Limited Liability Company	Mexico	462*3	Calle Guillermo Gonzalez Camarena 560, Parque Industrial La Ventana. Carr., Matamoros-Reynosa KM 9.6, Matamoros, Tamaulipas, 87360, Mexico
CB&I MIDDLE EAST HOLDING, INC.	Exempted Company	Cayman Islands	057273	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I NEDERLAND B.V.	Private Company with Limited Liability	Netherlands	27049906	Prinses Beatrixlaan 35, The Hague, 2595 AK, Netherlands
CB&I NORTH CAROLINA, INC.	Corporation	North Carolina	BUS 0125808	500 East Morehead, Suite 400, Charlotte, North Carolina 28202, United States
CB&I OFFSHORE SERVICES, INC.	Corporation	Louisiana	36532778D	2370 Towne Centre Blvd., Baton Rouge, Louisiana 70806, United States
CB&I OIL & GAS EUROPE B.V.	Private Company with Limited Liability	Netherlands	27154588	Prinses Beatrixlaan 35 2595 AK The Hague The Netherlands
CB&I PADDINGTON LIMITED	Private Limited Company	England	5064134	30 Eastbourne Terrace London W2 6LG
CB&I POWER COMPANY B.V.	Private Company with Limited Liability	Netherlands	33165719	Prinses Beatrixlaan 35 2595 AK The Hague The Netherlands
CB&I POWER INTERNATIONAL, INC.	Corporation	Louisiana	36743885 D	2370 Towne Centre Blvd., Baton Rouge, Louisiana 70806, United States
CB&I POWER LIMITED	Private Limited Company	England	4232396	500 Elder Gate, Milton Keynes, Buckinghamshire, England MK9 1BA, England
CB&I POWER, LLC	Limited Liability Company	Louisiana	36556230 D	2370 Towne Centre Blvd., Baton Rouge, Louisiana 70806, United States
CB&I PROJECT SERVICES GROUP, LLC	Limited Liability Company	Delaware	2375741	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I RIO GRANDE HOLDINGS, L.L.C.	Limited Liability Company	Louisiana	36462316 K	2370 Towne Centre Blvd., Baton Rouge, Louisiana 70806, United States
CB&I RIO GRANDE VALLEY FABRICATION & MANUFACTURING, L.L.C.	Limited Liability Company	Louisiana	36439842 K	2370 Towne Centre Blvd., Baton Rouge, Louisiana 70806, United States
CB&I RUSLAND B.V.	Private Company with Limited Liability	Netherlands	34196279	Prinses Beatrixlaan 35 2595 AK The Hague The Netherlands

<u>Exact Legal Name of Grantor</u>	<u>Type of Organization</u>	<u>Jurisdiction of Organization</u>	<u>Organizational Id. Number</u>	<u>Chief Executive Office</u>
CB&I SINGAPORE PTE. LTD.	Private Limited Company	Singapore	198400246W	Level 24 Menara Hap Seng 2, No. 1 Jalan P. Ramlee Kuala Lumpur 500250 Malaysia
CB&I STS DELAWARE LLC	Limited Liability Company	Delaware	7397128	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I STS HOLDINGS LLC	Limited Liability Company	Delaware	7397129	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I STORAGE TANK SOLUTIONS LLC	Limited Liability Company	Delaware	7273370	757 N. Eldridge Parkway Houston, TX 77079-4435
LUMMUS TECHNOLOGY INTERNATIONAL LLC	Limited Liability Company	Delaware	2284173	757 N. Eldridge Parkway Houston, TX 77079-4435
LUMMUS TECHNOLOGY OVERSEAS LLC	Limited Liability Company	Delaware	691523	757 N. Eldridge Parkway Houston, TX 77079-4435
LUMMUS TECHNOLOGY SERVICES LLC	Limited Liability Company	Delaware	5082788	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I TYLER LLC	Corporation	Delaware	3243476	1501 North Division Street, Plainfield, Illinois 60544- 8984, United States
CB&I UK LIMITED	Limited Company	England	04438080	20 Eastbourne Terrace, London Road, London, United Kingdom, United Kingdom
CB&I WALKER LA, L.L.C.	Limited Liability Company	Louisiana	34434762 K	30103 Sunland Drive, Walker, Louisiana 70785, United States
CBI AMERICAS LTD.	Corporation	Delaware	3877487	757 N. Eldridge Parkway Houston, TX 77079-4435
CBI COMPANY B.V.	Private Company with Limited Liability	Netherlands	66040019	Prinses Beatrixlaan 35 2595 AK The Hague The Netherlands
CBI COMPANY LTD.	Corporation	Delaware	0396427	757 N. Eldridge Parkway Houston, TX 77079-4435
CBI COMPANY TWO B.V.	Private Company with Limited Liability	Netherlands	67112102	Prinses Beatrixlaan 35 2595 AK The Hague The Netherlands
CBI CONSTRUCTORS PTY. LTD.	Company Limited by Shares	Australia	ACN 000 612 411	58 Thomas Road, Kwinana Beach WA, W. Australia 6167, Australia
CBI EASTERN ANSTALT	Independent Legal Entity	Liechtenstein	FL-0001.046.9364	Convention Tower Dubai World Trade Center Happiness Street Dubai, Dubai, United Arab

<u>Exact Legal Name of Grantor</u>	<u>Type of Organization</u>	<u>Jurisdiction of Organization</u>	<u>Organizational Id. Number</u>	<u>Chief Executive Office</u>
				Emirates, United Arab Emirates
CBI HOLDCO TWO INC.	Corporation	Delaware	6041680	757 N. Eldridge Parkway Houston, TX 77079-4435
CBI OVERSEAS (FAR EAST) INC.	Corporation	Delaware	6236001	757 N. Eldridge Parkway Houston, TX 77079-4435
CBI OVERSEAS, LLC	Limited Liability Company	Delaware	2728268	757 N. Eldridge Parkway Houston, TX 77079-4435
CBI PANAMA, S.A.	Sociedad Anonima	Panama	2180688	Edificio Plaza 2000, Calle 50, Apt. 0816-01098, Panama City, Panama, Panama
CBI SERVICES, LLC	Limited Liability Company	Delaware	2064902	757 N. Eldridge Parkway Houston, TX 77079-4435
CBI UK CAYMAN ACQUISITION LIMITED	Private Limited Company	England	10347901	40 Eastbourne Terrace, London, London W2 6LG, United Kingdom
CBI US HOLDING COMPANY INC.	Corporation	Delaware	6041426	757 N. Eldridge Parkway Houston, TX 77079-4435
CENTRAL TRADING COMPANY LTD.	Corporation	Delaware	2180688	1501 North Division Street, Plainfield, Illinois 60544, United States
CHEMICAL RESEARCH & LICENSING, LLC	Limited Liability Company	Texas	801708750	10100 Bay Area Blvd., Pasadena, Texas 77507, United States
CHICAGO BRIDGE & IRON (ANTILLES) N.V.	Limited Liability Company	Curacao	73137	Schottegatweg Oost 44, P. O. Box 812, Curacao, Netherlands Antilles, Netherlands Antilles
CHICAGO BRIDGE & IRON COMPANY	Corporation	Delaware	2580634	757 N. Eldridge Parkway Houston, TX 77079-4435
CHICAGO BRIDGE & IRON COMPANY	Corporation	Illinois	4909771	14105 S. Rt. 59, Plainfield, Illinois 60544, United States
CHICAGO BRIDGE & IRON COMPANY (DELAWARE)	Corporation	Delaware	0872560	757 N. Eldridge Parkway Houston, TX 77079-4435
CHICAGO BRIDGE & IRON COMPANY B.V.	Private Company with Limited Liability	Netherlands	33290578	Prinses Beatrixlaan 35 2595 AK The Hague The Netherlands
CHICAGO BRIDGE DE MÉXICO, S.A. DE C.V.	Sociedad Anonima	Mexico	231174	San Uriel No. 685, Colonia Chapalita Oriente, Zapopan, Jalisco, Mexico 45040, Mexico
COMET II B.V.	Private Company with Limited Liability	Netherlands	70292019	Prinses Beatrixlaan 35 2595 AK The Hague The Netherlands
CONSTRUCTORS INTERNATIONAL, L.L.C.	Limited Liability Company	Delaware	804707	3102 East Fifth Street, P.O. Box 956, Tyler, Texas 75710, United States
CSA TRADING COMPANY LTD.	Corporation	Delaware	3877489	757 N. Eldridge Parkway

<u>Exact Legal Name of Grantor</u>	<u>Type of Organization</u>	<u>Jurisdiction of Organization</u>	<u>Organizational Id. Number</u>	<u>Chief Executive Office</u>
				Houston, TX 77079-4435
EDS EQUIPMENT COMPANY, LLC	Limited Liability Company	Delaware	3289956	500 East Morehead, Suite 400, Charlotte, North Carolina 28202, United States
ENVIRONMENTAL SOLUTIONS (CAYMAN) LTD.	Exempted Company	Cayman Islands	199373	757 N. Eldridge Parkway Houston, TX 77079-4435
ENVIRONMENTAL SOLUTIONS HOLDING LTD.	Exempted Company	Cayman Islands	199740	757 N. Eldridge Parkway Houston, TX 77079-4435
ENVIRONMENTAL SOLUTIONS LTD.	Exempted Company	Cayman Islands	176814	757 N. Eldridge Parkway Houston, TX 77079-4435
HBI HOLDINGS, LLC	Limited Liability Company	Delaware	3073838	3102 East Fifth Street, Tyler, Texas 75710, United States
HIGHLAND TRADING COMPANY, LTD.	Exempted Company	Cayman Islands	33433	P.O. Box 3534, Fort Saskatchewan, Alberta T8L2T4, Canada
HORTON CBI, LIMITED	Corporation	Canada	455831	55116 Hwy 825, Sturgeon Industrial Park, Sturgeon County, Alberta T8L 5C1, Canada
HOWE-BAKER ENGINEERS, LTD.	Limited Partnership	Texas	036393	Highway 850 East, Tyler, Texas 75705, United States
HOWE-BAKER HOLDINGS, L.L.C.	Limited Liability Company	Delaware	803053	3102 East Fifth Street, Tyler, TX, Texas 75710, United States
HOWE-BAKER INTERNATIONAL MANAGEMENT, LLC	Limited Liability Company	Delaware	3073839	3102 East Fifth Street, Tyler, TX, Texas 75710, United States
HOWE-BAKER INTERNATIONAL, L.L.C.	Limited Liability Company	Delaware	0707962623	3102 East Fifth Street, Tyler, TX, Texas 75710, United States
HOWE-BAKER MANAGEMENT, L.L.C.	Limited Liability Company	Delaware	2947685	3102 East Fifth Street, Tyler, TX, Texas 75710, United States
INTERNATIONAL CONSULTANTS, L.L.C.	Limited Liability Company	Louisiana	34964254 K	3102 East Fifth Street, Tyler, TX, Texas 75710, United States
LEALAND FINANCE COMPANY B.V.	Private Company with Limited Liability	Netherlands	33287866	Prinses Beatrixlaan 35 2595 AK The Hague The Netherlands
LUMMUS ARABIA LTD. CO.	Limited Liability Company	Saudi Arabia	2051011082	3rd Floor Sadat Tower-Dammam-Khobar Highway, P.O. Box 31682, Al Khobar, Saudi Arabia 31952, Saudi Arabia
LUMMUS CONSULTANTS INTERNATIONAL LIMITED	Private Company Limited by Shares	England	4025810	Stores Road, Derby, Derbyshire, England DE21 4BG, England
LUMMUS CONSULTANTS	Limited Liability	Louisiana	34982772 D	Two Riverway, Suite 1300, Houston, Texas 77056

<u>Exact Legal Name of Grantor</u>	<u>Type of Organization</u>	<u>Jurisdiction of Organization</u>	<u>Organizational Id. Number</u>	<u>Chief Executive Office</u>
INTERNATIONAL LLC	Company			
LUMMUS GASIFICATION TECHNOLOGY LICENSING LLC	Limited Liability Company	Delaware	4932365	757 N. Eldridge Parkway Houston, TX 77079-4435
LUMMUS TECHNOLOGY VENTURES LLC	Limited Liability Company	Delaware	2284169	1515 Broad Street, Bloomfield, New Jersey 07003, United States
LUMMUS TECHNOLOGY B.V.	Private Company with Limited Liability	Netherlands	27186172	Prinses Beatrixlaan 35 2595 AK The Hague The Netherlands
LUMMUS TECHNOLOGY HEAT TRANSFER B.V.	Private Company with Limited Liability	Netherlands	27110728	Prinses Beatrixlaan 35 2595 AK The Hague The Netherlands
LUMMUS TECHNOLOGY LLC	Limited Liability Company	Delaware	292822	1515 Broad Street, Bloomfield, New Jersey 07003, United States
LUTECH PROJECT SOLUTIONS B.V.	Private Company with Limited Liability	Netherlands	67250726	Prinses Beatrixlaan 35 2595 AK The Hague The Netherlands
LUTECH PROJECTS B.V.	Private Company with Limited Liability	Netherlands	67250750	Prinses Beatrixlaan 35 2595 AK The Hague The Netherlands
LUTECH RESOURCES B.V.	Private Company with Limited Liability	Netherlands	27339069	Prinses Beatrixlaan 35 2595 AK The Hague The Netherlands
LUTECH RESOURCES CANADA LTD.	Corporation	Canada (Alberta)	20154650461/803 3208859 RT 0001	261 Seneca Road, Sherwood Park, Alberta T8A 4G6, Canada
LUTECH RESOURCES INC.	Corporation	Delaware	3301346	757 N. Eldridge Parkway Houston, TX 77079-4435
LUTECH RESOURCES LIMITED	Private Company Limited by Shares	England	2726614	50 Eastbourne Terrace, Paddington, London, United Kingdom W2 6LX, England
MATRIX ENGINEERING, LTD.	Corporation	Texas	12398310	5324 Gorman Rd, Beaumont, Texas 77705, United States
MATRIX MANAGEMENT SERVICES, LLC	Limited Liability Company	Delaware	3073842	5324 Gorman Rd., Beaumont, Texas 77705, United States
NETHERLANDS OPERATING COMPANY B.V.	Private Company with Limited Liability	Netherlands	27117132	Prinses Beatrixlaan 35, The Hague, The Hague 2595 AK, Netherlands
NOVOLEN TECHNOLOGY HOLDINGS C.V.	Partnership	Netherlands	27191510	Prinses Beatrixlaan 35 2595 AK The Hague The Netherlands
NUCLEAR ENERGY HOLDINGS, L.L.C.	Limited Liability	Delaware	4222063	2370 Towne Centre Blvd., Baton Rouge, Louisiana 70806, United

<u>Exact Legal Name of Grantor</u>	<u>Type of Organization</u>	<u>Jurisdiction of Organization</u>	<u>Organizational Id. Number</u>	<u>Chief Executive Office</u>
	Company			States
OASIS SUPPLY COMPANY, LTD.	Exempted Company	Cayman Islands	39147	757 N. Eldridge Parkway Houston, TX 77079-4435
OCEANIC CONTRACTORS, INC.	Corporation	Delaware	615426	1501 North Division Street, Plainfield, Illinois 60544, United States
OXFORD METAL SUPPLY LIMITED	Company Limited by Shares	England	00658643	40 Eastbourne Terrace, London, United Kingdom
PIKE PROPERTIES II, INC.	Corporation	Louisiana	2207804	757 N. Eldridge Parkway Houston, TX 77079-4435
PIPEWORK ENGINEERING AND DEVELOPMENTS LIMITED	Private Company Limited by Shares	England	2207804	40 Eastbourne Terrace, London, England W2 6LG, England
PROSPECT INDUSTRIES (HOLDINGS) INC.	Corporation	Delaware	0822184	2370 Towne Centre Blvd., Baton Rouge, Louisiana 70806, United States
S C WOODS, L.L.C.	Limited Liability Company	Delaware	3375842	2370 Towne Centre Blvd., Baton Rouge, Louisiana 70806, United States
SHAW BENECO, INC.	Corporation	Louisiana	35262502 D	2370 Towne Centre Blvd., Baton Rouge, Louisiana 70806, United States
SHAW CONNEX, INC.	Corporation	Delaware	2268642	81 Connex Way, Troutville, Virginia 24175, United States
SHAW DUNN LIMITED	Private Company Limited by Shares	England	3465940	40 Eastbourne Terrace, London, England W2 6LG, England
SHAW E & I INTERNATIONAL LTD.	Exempted Company	Cayman Islands	122391	757 N. Eldridge Parkway Houston, TX 77079-4435
SHAW ENERGY SERVICES, INC.	Corporation	Louisiana	36210195 D	2370 Towne Centre Blvd., Baton Rouge, Louisiana 70806, United States
SHAW FABRICATORS, INC.	Corporation	Louisiana	34577312 D	757 N. Eldridge Parkway Houston, TX 77079-4435
SHAW FAR EAST SERVICES, LLC	Limited Liability Company	Louisiana	40492207K	757 N. Eldridge Parkway Houston, TX 77079-4435
SHAW GROUP UK LIMITED	Limited Company	England	3465952	40 Eastbourne Terrace, London, England W2 6LG, England
SHAW HOME LOUISIANA, LLC	Limited Liability Company	Louisiana	36062448 D	2370 Towne Centre, Baton Rouge, Louisiana 70806, United States
SHAW INTERNATIONAL INC.	Corporation	Delaware	6235999	757 N. Eldridge Parkway Houston, TX 77079-4435
SHAW INTERNATIONAL	Corporation	Louisiana	35315071 D	2370 Towne Centre Blvd., Baton

<u>Exact Legal Name of Grantor</u>	<u>Type of Organization</u>	<u>Jurisdiction of Organization</u>	<u>Organizational Id. Number</u>	<u>Chief Executive Office</u>
MANAGEMENT SERVICES TWO, INC.				Rouge, Louisiana 70806, United States
SHAW JV HOLDINGS, L.L.C.	Limited Liability Company	Louisiana	34982355 K	2370 Towne Centre Blvd., Baton Rouge, Louisiana 70806, United States
SHAW MANAGED SERVICES, LLC	Limited Liability Company	Louisiana	34514062 D	2370 Towne Centre Blvd., Baton Rouge, Louisiana 70806, United States
SHAW MANAGEMENT SERVICES ONE, INC.	Corporation	Louisiana	35315066 D	2370 Towne Centre Blvd., Baton Rouge, Louisiana 70806, United States
SHAW NC COMPANY, INC.	Corporation	North Carolina	BUS 0051489	500 East Morehead, Suite 400, Charlotte, North Carolina 28202, United States
SHAW NUCLEAR ENERGY HOLDINGS (UK), INC.	Corporation	Louisiana	36225445 D	2370 Towne Centre Blvd., Baton Rouge, Louisiana 70806, United States
SHAW OVERSEAS (MIDDLE EAST) LTD.	Exempted Company	Cayman Islands	47372	757 N. Eldridge Parkway Houston, TX 77079-4435
SHAW POWER DELIVERY SYSTEMS, INC.	Corporation	Louisiana	36210198 D	2370 Towne Centre Blvd, Baton Rouge, Louisiana 70806, United States
SHAW POWER SERVICES GROUP, L.L.C.	Limited Liability Company	Louisiana	35160959 K	2370 Towne Centre Blvd, Baton Rouge, Louisiana 70806, United States
SHAW POWER SERVICES, LLC	Limited Liability Company	Louisiana	34542562 D	2370 Towne Centre Blvd, Baton Rouge, Louisiana 70806, United States
SHAW POWER TECHNOLOGIES, INC.	Corporation	Louisiana	35042951 D	2370 Towne Centre Blvd, Baton Rouge, Louisiana 70806, United States
SHAW PROCESS FABRICATORS, INC.	Corporation	Louisiana	34219686 D	36445 Perkins Road, Prairieville, Louisiana 70769, United States
SHAW SERVICES, L.L.C.	Limited Liability Company	Louisiana	35160960 K	2370 Towne Centre Blvd, Baton Rouge, Louisiana 70806, United States
SHAW SSS FABRICATORS, INC.	Corporation	Louisiana	35040408 D	757 N. Eldridge Parkway Houston, TX 77079-4435
SHAW TRANSMISSION & DISTRIBUTION SERVICES INTERNATIONAL, INC.	Corporation	Delaware	3045510	500 East Morehead, Suite 400, Charlotte, North Carolina 28202, United States
SHAW TRANSMISSION & DISTRIBUTION SERVICES, INC.	Corporation	Louisiana	35315074 D	2370 Towne Centre Blvd, Baton Rouge, Louisiana 70806, United States
TVL LENDER II, INC.	Corporation	Delaware	4767193	2370 Towne Centre Blvd, Baton Rouge, Louisiana 70806, United States
WHESOE PIPING SYSTEMS LIMITED	Private Company Limited by Shares	England	3573347	40 Eastbourne Terrace, London, England W2 6LG, England

<u>Exact Legal Name of Grantor</u>	<u>Type of Organization</u>	<u>Jurisdiction of Organization</u>	<u>Organizational Id. Number</u>	<u>Chief Executive Office</u>
MCDERMOTT SERVIÇOS OFFSHORE DO BRASIL LTDA.	Limited Liability Company	Brazil	33.2.0011432-5	Avenida República do Chile, No. 230, office 1301, Centro, ZIP Code 20.031-170, City and State of Rio de Janeiro
MCDERMOTT TECHNOLOGY, LLC	Limited Liability Company	Delaware	7704084	757 N. Eldridge Parkway Houston, TX 77079-4435
CB&I (US) HOLDINGS, LIMITED	Private Limited Company	England and Wales	12332536	40 Eastbourne Terrace, London W2 6LG, United Kingdom
MCDERMOTT EASTERN HEMISPHERE, LTD.	Category 1 Global Business Company	Mauritius	13470	IQ EQ Corporate Services (Mauritius) Ltd, 33 Edith Cavell Street, Port-Louis, Mauritius

Prior Names during last 5 years:

On October 29, 2014, J. Ray McDermott Contractors, Inc. changed its name to McDermott Subsea, Inc.

On October 15, 2014, B.F. Shaw, Inc. changed its name to CB&I Laurens, Inc.

On November 4, 2014, Shaw Mid States Pipe Fabricating, Inc. changed its name to CB&I El Dorado, Inc.

On December 18, 2014, Cojafex B.V. changed its name to CB&I Cojafex B.V.

On December 22, 2014, Shaw FMG, LLC changed its name to CB&I Lake Charles, L.L.C.

On December 22, 2014, Shaw Rio Grande Holdings, L.L.C. changed its name to CB&I Rio Grande Holdings, L.L.C.

On December 22, 2014, Shaw Rio Grande Valley Fabrication & Manufacturing, L.L.C. changed its name to CB&I Rio Grande Valley Fabrication & Manufacturing, L.L.C.

On February 24, 2015, The Shaw Group International Inc. changed its name to CB&I Middle East Holding, Inc.

On June 12, 2015, Shaw Group Power Limited changed its name to CB&I Power Limited.

On June 22, 2015, Shaw Global, L.L.C. changed its name to CB&I Global, L.L.C.

On August 12, 2015, Shaw Group UK Holdings changed its name to CB&I Group UK Holdings.

On November 6, 2015, S&W International, LLC changed its name to CB&I International, LLC.

On November 23, 2015, CB&I Power, Inc. changed its name to CB&I Power, LLC.

On February 1, 2016, Shaw Stone & Webster International, LLC changed its name to CB&I International One, LLC.

On June 30, 2016, CB&I Inc. changed its name to CB&I LLC.

On December 7, 2016, CBI Services, Inc. changed its name to CBI Services, LLC.

On March 29, 2017, Lummus Technology Inc. changed its name to Lummus Technology LLC.

On May 9, 2017, Shaw Home Louisiana, Inc. changed its name to Shaw Home Louisiana, LLC.

On December 1, 2017, CB&I Tyler Company changed its name to CB&I Tyler LLC.

On December 4, 2017, 850 PINE STREET INC. changed its name to 850 Pine Street LLC.

On December 22, 2017, CB&I Technology Inc. changed its name to Lummus Technology LLC.

On December 22, 2017, CB&I Technology Services Company changed its name to Lummus Technology Services LLC.

On December 22, 2017, CB&I Technology Ventures, Inc. changed its name to Lummus Technology Ventures LLC.

On December 26, 2017, Lummus Consultants International, Inc. changed its name to Lummus Consultants International LLC.

On December 31, 2017, Lummus Gasification Technology Licensing Company changed its name to Lummus Gasification Technology Licensing LLC.

On December 31, 2017, CB&I Technology International Corporation changed its name to Lummus Technology International LLC.

On December 31, 2017, CB&I Technology Overseas Corporation changed its name to Lummus Technology Overseas LLC.

On February 2, 2018, The Shaw Group Inc. changed its name to CB&I Group Inc.

On March 6, 2018, Lummus Alireza Ltd. Co. changed its name to Lummus Arabia Ltd. Co.

Prior Jurisdictions of Organization during last 5 years:

On December 1, 2016, Shaw International Ltd., a Cayman company, became Shaw International Inc., a Delaware corporation.

Prior Corporate Structures during last 5 years:

On December 4, 2017, 850 Pine Street Inc. converted to 850 Pine Street LLC.

On March 3, 2015, Stone & Webster Holding One, Inc. merged into CB&I Group Inc.

On March 3, 2015, Stone & Webster Holding Two, Inc. merged into CB&I Group Inc.

On June 30, 2016, CB&I Inc. converted to CB&I LLC.

On December 1, 2017, CB&I Tyler Company converted to CB&I Tyler LLC.

On December 26, 2017, Lummus Consultants International, Inc. converted to Lummus Consultants International LLC.

On December 22, 2017, Lummus Gasification Technology Licensing Company converted to Lummus Gasification Technology Licensing LLC.

On December 22, 2017, CB&I Technology International Corporation converted to Lummus Technology International LLC.

On December 22, 2017, CB&I Technology Inc. converted to Lummus Technology LLC.

On December 22, 2017, CB&I Technology Overseas Corporation converted to Lummus Technology Overseas LLC.

On December 22, 2017, CB&I Technology Services Company converted to Lummus Technology Services LLC.

On December 22, 2017, CB&I Technology Ventures, Inc. converted to Lummus Technology Ventures LLC.

On May 9, 2017, Shaw Home Louisiana, Inc. converted to Shaw Home Louisiana, LLC.

Prior Addresses of Chief Executive Office/Sole Place of Business during last 5 years:

The former chief executive office of Chartering Company (Singapore) Pte. Ltd. was located at: 11 Lorong 3, Toa Payoh, Block A#01-01, Jackson Square, Singapore 319579.

The former chief executive office of McDermott Asia Pacific Pte. Ltd. was located at: 11 Lorong 3, Toa Payoh, Block A#01-01, Jackson Square, Singapore 319579 .

The former chief executive office of J. Ray McDermott (Aust.) Pty. Limited was located at: Level 9, 220 St. Georges Terrace, Perth, WA 6000.

The former chief executive office of J. Ray McDermott (Qingdao) Pte. Ltd. was located at: 11 Lorong 3, Toa Payoh, Block A#01-01, Jackson Square, Singapore 319579 .

The former chief executive office of J. Ray McDermott International, Inc. was located at: Apton House, 5-6 Empire Way, Wembley, Middlesex HA9 OXA, United Kingdom.

The former chief executive office of McDermott Australia Pty. Ltd. was located at: Level 9, 220 St. Georges Terrace, Perth, WA 6000

The former chief executive office of McDermott Holdings (U.K.) Limited was located at: Apton House, 5-6 Empire Way, Wembley, Middlesex HA9 OXA, United Kingdom.

The former chief executive office of McDermott Marine Construction Limited was located at: Apton House, 5-6 Empire Way, Wembley, Middlesex HA9 OXA, United Kingdom.

The former chief executive office of North Atlantic Vessel, Inc. was located at: 8 Jurong Town Hall Rd, 24-01 The Summit, Singapore 609434.

The former chief executive office of CBI Services, LLC was located at 14107 S. Rt. 59, Plainfield, Illinois 0544-8984, United States.

The former chief executive office of Shaw Fabricators, Inc. was located at 4171 Essen Lane, Baton Rouge, Louisiana 70809, United States.

The former chief executive office of each of 850 Pine Street LLC, Atlantic Contingency Constructors II, LLC, CB&I Clearfield, Inc., CB&I Connecticut, Inc., CB&I El Dorado, Inc., CB&I Financial Resources LLC, CB&I Global, L.L.C., CB&I Group Inc., CB&I Holdco International, LLC, CB&I Holdco, LLC, CB&I Houston 06 LLC, CB&I Houston 07 LLC, CB&I Houston 08 LLC, CB&I Houston 09 LLC, CB&I Houston 10 LLC, CB&I Houston 11 LLC, CB&I Houston 12 LLC, CB&I Houston 13 LLC, CB&I Houston LLC, CB&I LLC, CB&I Project Services Group, LLC, CB&I Storage Tank Solutions LLC, CB&I STS Delaware LLC, CB&I STS Holdings LLC, CBI Company Ltd., Lummus Technology International LLC, Lummus Technology Overseas LLC, Lummus Technology Services LLC, CBI Americas Ltd., CBI Company Ltd., CBI Holdco Two Inc., CBI Overseas (Far East) Inc., CBI Overseas, LLC, CBI Services, LLC, CBI Us Holding Company Inc., Chicago Bridge & Iron Company, Chicago Bridge & Iron Company (Delaware), CSA Trading Company Ltd., Lummus Gasification Technology Licensing LLC, Lutech Resources Inc., Pike Properties II, Inc., Shaw Fabricators, Inc., Shaw Far East Services, LLC, Shaw International Inc. and Shaw SSS Fabricators, Inc. was located at 2103 Research Forest Drive, The Woodlands, Texas 77380, United States.

The former chief executive office of McDermott Serviços Offshore do Brasil Ltda. was located at: Avenida Rio Branco, nº 110, office 3101, Zip Code 20040-001, City and State of Rio de Janeiro.

SCHEDULE 4.5
TO PLEDGE AND SECURITY AGREEMENT

INVENTORY LOCATIONS

1. 8904 Fairbanks North Houston Rd., Houston, Texas 77064
2. 9600 Hickman Rd., Clive, Iowa 50325
3. 5500 S 1st Ave., Everett, Washington 98203
4. 10100 Bay Area Blvd., Pasadena, Texas 77507
5. Bay Area Business Park, Bldg 1, 9311 Bay Area Blvd., Pasadena, Texas 77507

SCHEDULE 4.7
TO PLEDGE AND SECURITY AGREEMENT

INVESTMENT PROPERTY

Legend:

- If the word "unknown" is listed in the "Certificate No." column below, the stock certificate for this Pledged Equity is not in the possession of McDermott International, Inc., and its whereabouts are unknown. It is uncertain whether these stock certificates exist, but assuming that stock certificates do exist, these stock certificates have been included on Schedule 4.12. These stock certificates (if any) will be delivered to the Collateral Agent promptly after they come into the possession of the applicable Grantors. Such Grantor will use commercially reasonable efforts to cause such stock certificates to be re-issued (if permitted by relevant law and such issuer's Constituent Documents), issued (if permitted by relevant law and such issuer's Constituent Documents) or to locate such stock certificates, as applicable.
- The Percentage of Interest Pledged represents the percentage interest of the Issuer being pledged by the specific Grantor.

Pledged Stock:

<u>Grantor</u>	<u>Issuer</u>	<u>Type of Organization</u>	<u># of Shares Owned</u>	<u>Total Shares Outstanding</u>	<u>% of Interest Pledged</u>	<u>Certificate No.</u>	<u>Par Value</u>
J. RAY MCDERMOTT, S. A. MCDERMOTT HOLDINGS (M) SDN. BHD.	BERLIAN MCDERMOTT SDN. BHD. (f/k/a BARMADA MCDERMOTT SDN. BHD.)	Corporation	36,540,100 (Ordinary) 100,000 (Preferred) 109,664,148 (ordinary)	146,160,400 (Ordinary) 100,000 (Preferred)	25% 100% 75%	11, 15, 20, 22 P001 23, 25	RM 1.00
MCDERMOTT INTERNATIONAL TRADING CO., INC.	MCDERMOTT AZERBAIJAN MARINE CONSTRUCTION INC.	Corporation	100,000	125,000	80%	4	US\$1.00
J. RAY MCDERMOTT, S. A.	CHARTERING COMPANY (SINGAPORE) PTE. LTD.	Corporation	25,000	25,000	100%	4	SGD 1.00
MCDERMOTT INTERNATIONAL INVESTMENTS CO., INC.	DEEPSEA GROUP LIMITED	International Company	1758 (Class A) 242 (Class B)	1758 (Class A) 242 (Class B)	100% 100%	uncertificated uncertificated	AED 10 AED 10
MC DERMOTT OVERSEAS INVESTMENT CO. N.V.	DELTA CATALYTIC (HOLLAND) B.V.	Corporation	600,000	600,000	100%	Uncertificated	NLG 1.00
HYDRO MARINE SERVICES, INC.	EASTERN MARINE SERVICES, INC.	Corporation	100,000	100,000	100%	1	US\$ 1.00
MCDERMOTT ASIA PACIFIC PTE. LTD.	ELDRIDGE PTE. LTD.	Corporation	1 ordinary share 49 ordinary shares 50 ordinary shares	100	100%	1 4 5	US \$1.00
MCDERMOTT OFFSHORE SERVICES COMPANY, INC.	FLOATEC DE MEXICO, S.A. DE C.V.	Corporation	25,000	50,000	50%	1	1.00 Mexican Peso

<u>Grantor</u>	<u>Issuer</u>	<u>Type of Organization</u>	<u># of Shares Owned</u>	<u>Total Shares Outstanding</u>	<u>% of Interest Pledged</u>	<u>Certificate No.</u>	<u>Par Value</u>
MCDERMOTT OFFSHORE SERVICES COMPANY, INC.	FLOATEC SINGAPORE PTE. LTD.	Corporation	50	100	50%	4	SGD 1.00
J. RAY MCDERMOTT, S. A.	HYDRO MARINE SERVICES, INC.	Corporation	100,000	100,000	100%	4	US\$1.00
J. RAY MCDERMOTT, S. A.	INTERNATIONAL VESSELS LTD	Corporation	2	2	100%	2	US\$1.00
NORTH ATLANTIC VESSEL, INC.	J. RAY MCDERMOTT (AUST.) HOLDING PTY. LIMITED	Corporation	1,000,000	1,000,000	100%	8 & 9	A\$1.00
J. RAY MCDERMOTT, S. A.	J. RAY MCDERMOTT CANADA HOLDING, LTD.	Corporation	3,868,301	3,868,301	100%	2, 3, 4	No Par
J. RAY MCDERMOTT UNDERWATER SERVICES, INC.	J. RAY MCDERMOTT DE MEXICO, S.A. DE C.V.	Corporation	1,115,999,999	1,116,000,000	>99%	6	1.00 Mexican Peso
J. RAY MCDERMOTT INTERNATIONAL, INC.			1		<1%	7	
J. RAY MCDERMOTT UNDERWATER SERVICES, INC.	J. RAY MCDERMOTT DE MEXICO, S.A. DE C.V.	Corporation	2,845,409,094	2,845,409,094	100%	8, 9, 13-16	1.00 Mexican Peso
MCDERMOTT ASIA PACIFIC PTE. LTD. (f/k/a J. RAY MCDERMOTT ASIA PACIFIC PTE. LTD.)	J. RAY MCDERMOTT ENGINEERING SERVICES PRIVATE LIMITED	Corporation	9,900	10,000	99%	1 & 2	10.00 Indian Rupees
MCDERMOTT EASTERN HEMISPHERE, LTD.			100		1%	3	
J. RAY MCDERMOTT INTERNATIONAL, INC.	J. RAY MCDERMOTT FAR EAST, INC.	Corporation	1,000	1,000	100%	4	US \$1.00
J. RAY MCDERMOTT, S. A.	J. RAY MCDERMOTT INTERNATIONAL, INC.	Corporation	1,000	1,000	100%	3	US \$1.00
MC DERMOTT INTERNATIONAL MARINE INVESTMENTS N.V.	J. RAY MCDERMOTT INVESTMENTS B.V.	Corporation	272,268	272,268	100%	Uncertificated	E 1.00
MCDERMOTT ASIA PACIFIC PTE. LTD. (f/k/a J. RAY MCDERMOTT ASIA PACIFIC PTE. LTD.)	J RAY MCDERMOTT LOGISTIC SERVICES PRIVATE LIMITED	Corporation	9,900	10,000	99%	1 & 2	10.00 Indian Rupees
MCDERMOTT EASTERN HEMISPHERE, LTD.			100		1%	3	

<u>Grantor</u>	<u>Issuer</u>	<u>Type of Organization</u>	<u># of Shares Owned</u>	<u>Total Shares Outstanding</u>	<u>% of Interest Pledged</u>	<u>Certificate No.</u>	<u>Par Value</u>
MCDERMOTT, INC. (f/k/a J. RAY MCDERMOTT, INC.)	J. RAY MCDERMOTT (NIGERIA) LIMITED	Corporation	4,999,999	5,000,000	>99%	1	NGN 1.00
J. RAY MCDERMOTT HOLDINGS, LLC			1		<1%	2	
J. RAY MCDERMOTT INTERNATIONAL, INC.	J. RAY MCDERMOTT (NORWAY), AS	Limited Company	100,000	100,000	100%	Uncertificated	NOK 2.00
MCDERMOTT ASIA PACIFIC PTE. LTD. (f/k/a J. RAY MCDERMOTT ASIA PACIFIC PTE. LTD.)	J. RAY MCDERMOTT (QINGDAO) PTE. LTD.	Corporation	1	1	100%	2	N/A
MCDERMOTT INTERNATIONAL, INC.	J. RAY MCDERMOTT, S. A.	Corporation	500	500	100%	7	No Par
MCDERMOTT, INC. (f/k/a J. RAY MCDERMOTT, INC.)	J. RAY MCDERMOTT SOLUTIONS, INC. (f/k/a J. RAY MCDERMOTT ENGINEERING HOLDINGS, INC.)	Corporation	1,000	1,000	100%	3	US \$1.00
J. RAY MCDERMOTT HOLDINGS, LLC	J. RAY MCDERMOTT TECHNOLOGY, INC.	Corporation	1,000	1,000	100%	5	US \$0.01
J. RAY MCDERMOTT INTERNATIONAL, INC.	J. RAY MCDERMOTT UNDERWATER SERVICES, INC.	Corporation	1,000	1,000	100%	1	US \$1.00
J. RAY MCDERMOTT, S. A.	MALMAC SDN. BHD.	Corporation	5,000,000	5,000,000	100%	014, 018	M \$1.00
J. RAY MCDERMOTT, S. A.	MCDERMOTT (AMAZON CHARTERING), INC.	Corporation	1,000	1,000	100%	1	US \$1.00
J. RAY MCDERMOTT, S. A.	MCDERMOTT ARABIA COMPANY LIMITED	Corporation	606	2,020	30%	Uncertificated	Saudi Riyals 5,000.00
J. RAY MCDERMOTT, S. A.	MCDERMOTT ARABIA HOLDINGS, INC.	Corporation	629 Class A 214 Class B 57 Class C	729 Class A 214 Class B 57 Class C	90%	1 Class A 2 Class B 1 Class C	No Par
J. RAY MCDERMOTT, S. A.	MCDERMOTT ASIA PACIFIC PTE. LTD. (f/k/a J. RAY MCDERMOTT ASIA PACIFIC PTE. LTD.)	Corporation	7,450,000	7,450,000	100%	7	S\$1.00
J. RAY MCDERMOTT, S. A.	MCDERMOTT ASIA PACIFIC SDN. BHD.	Company Limited by Shares	2,500,100	2,500,100	100%	3, 4, 5	RM1.00
J. RAY MCDERMOTT (AUST.) HOLDING PTY. LIMITED	MCDERMOTT AUSTRALIA PTY. LTD.	Corporation	1,000,000	1,000,000	100%	8	A \$1.00
J. RAY MCDERMOTT, S. A.	MCDERMOTT CAPITAL MALAYSIA SDN. BHD.	Corporation	480	1,000	48%	5	RM1.00
J. RAY MCDERMOTT, S. A.	MCDERMOTT CASPIAN CONTRACTORS, INC.	Corporation	100,000	100,000	100%	2	US \$1.00
J. RAY MCDERMOTT, S. A.	MCDERMOTT (DLV 2000) CHARTERING, INC.	Corporation	1,000	1,000	100%	1	No Par

<u>Grantor</u>	<u>Issuer</u>	<u>Type of Organization</u>	<u># of Shares Owned</u>	<u>Total Shares Outstanding</u>	<u>% of Interest Pledged</u>	<u>Certificate No.</u>	<u>Par Value</u>
MCDERMOTT MIDDLE EAST, INC. (f/k/a J. RAY MCDERMOTT MIDDLE EAST, INC.)	MCDERMOTT EASTERN HEMISPHERE, LTD. (f/k/a J. RAY MCDERMOTT EASTERN HEMISPHERE LIMITED)	Corporation	6,502	6,502	100%	4 & 5	US \$100.00
J. RAY MCDERMOTT, S. A.	MCDERMOTT FAR EAST INC.	Corporation	50,000	50,000	100%	5	US \$1.00
J. RAY MCDERMOTT, S. A.	MCDERMOTT GULF OPERATING COMPANY, INC.	Corporation	100,000	100,000	100%	4	No Par
J. RAY MCDERMOTT, S. A.	MCDERMOTT HOLDINGS (U.K.) LIMITED	Corporation	29,005,333	29,005,333	100%	5	£1.00
J. RAY MCDERMOTT HOLDINGS, LLC	MCDERMOTT, INC. (f/k/a J. RAY MCDERMOTT, INC.)	Corporation	1,000	1,000	100%	6	US \$1.00
J. RAY MCDERMOTT HOLDINGS, LLC	MCDERMOTT INTERNATIONAL B.V.	Corporation	400,000	400,000	100%	Uncertificated	NLGI
MCDERMOTT INTERNATIONAL MANAGEMENT, S. DE RL.	MCDERMOTT INTERNATIONAL INVESTMENTS CO., INC.	Corporation	100,000	100,000	100%	3	US \$1.00
J. RAY MCDERMOTT INTERNATIONAL, INC.	MC DERMOTT INTERNATIONAL MARINE INVESTMENTS N.V.	Corporation	6,000 preferred 24,000 common	6,000 24,000	100%	3 4	US \$1.00 US \$1.00
MCDERMOTT INTERNATIONAL INVESTMENTS CO., INC.	MCDERMOTT INTERNATIONAL TRADING CO., INC.	Corporation	100,000	100,000	100%	1	US \$1.00
J. RAY MCDERMOTT, S. A.	MCDERMOTT INTERNATIONAL VESSELS, INC.	Corporation	1,000	1,000	100%	2	No Par
MCDERMOTT SUBSEA, INC.	MCDERMOTT MARINE CONSTRUCTION GHANA LIMITED	Corporation	814,000	814,000	100%	Uncertificated	No Par
MCDERMOTT INTERNATIONAL TRADING CO., INC.	MCDERMOTT MARINE CONSTRUCTION LIMITED	Corporation	10,000,000	10,000,000	100%	3	£1.00
MCDERMOTT OFFSHORE SERVICES COMPANY, INC.	MCDERMOTT MARINE MEXICO, S.A. DE C.V.	Corporation	49,999	50,000	100%	5	1.00 Mexican Peso
MCDERMOTT OLD JV OFFICE, INC.			1			4	1.00 Mexican Peso
J. RAY MCDERMOTT INTERNATIONAL, INC.	MCDERMOTT MIDDLE EAST, INC. (f/k/a J. RAY MCDERMOTT MIDDLE EAST, INC.)	Corporation	10,000	10,000	100%	7	US \$1.00
J. RAY MCDERMOTT, S. A.	MCDERMOTT OFFSHORE SERVICES COMPANY, INC.	Corporation	100,000	100,000	100%	3	US \$1.00

<u>Grantor</u>	<u>Issuer</u>	<u>Type of Organization</u>	<u># of Shares Owned</u>	<u>Total Shares Outstanding</u>	<u>% of Interest Pledged</u>	<u>Certificate No.</u>	<u>Par Value</u>
J. RAY MCDERMOTT INTERNATIONAL, INC.	MCDERMOTT OLD JV OFFICE, INC.	Corporation	1,000	1,000	100%	9	US \$1.00
J. RAY MCDERMOTT, S. A.	MCDERMOTT OVERSEAS, INC.	Corporation	10,000	10,000	100%	4	US \$1.00
MCDERMOTT INTERNATIONAL TRADING CO., INC.	MC DERMOTT OVERSEAS INVESTMENT CO. N.V.	Corporation	6,000 Series A Preferred	6,000 Series A Preferred	100%	3	US \$1.00
			24,000 Series B Common	24,000 Series B Common	100%	4	US \$1.00
J. RAY MCDERMOTT, S. A.	MCDERMOTT PROJECT SUPPORT FZE	Corporation	1	1	100%	1	AED 1,000,000
J. RAY MCDERMOTT HOLDINGS, LLC	MCDERMOTT SUBSEA ENGINEERING, INC. (f/k/a MENTOR SUBSEA TECHNOLOGY SERVICES, INC.)	Corporation	1,000	1,000	100%	6	US \$1.00
J. RAY MCDERMOTT INTERNATIONAL, INC.	MCDERMOTT SUBSEA, INC. (f/k/a J. RAY MCDERMOTT CONTRACTORS, INC.)	Corporation	100,000	100,000	100%	2	US \$1.00
MCDERMOTT INTERNATIONAL, INC.	MCDERMOTT TECHNOLOGY, B.V.	Corporation	1	1	100%	Uncertificated	US \$1.00
MCDERMOTT TECHNOLOGY, B.V.	MCDERMOTT TECHNOLOGY (2), B.V.	Corporation	1	1	100%	Uncertificated	US \$1.00
MCDERMOTT TECHNOLOGY (2), B.V.	MCDERMOTT TECHNOLOGY (3), B.V.	Corporation	1	1	100%	Uncertificated	US \$1.00
MCDERMOTT INTERNATIONAL, INC.	MCDERMOTT TECHNOLOGY (AMERICAS), INC.	Corporation	100	100	100%	1	US \$.01
MCDERMOTT INTERNATIONAL, INC.	MCDERMOTT TECHNOLOGY (US), INC.	Corporation	100	100	100%	1	US \$.01
J. RAY MCDERMOTT, S. A.	NORTH ATLANTIC VESSEL, INC.	Corporation	100,000	100,000	100%	3	US \$1.00
OFFSHORE PIPELINES INTERNATIONAL, LTD.	OFFSHORE PIPELINES NIGERIA LIMITED	Corporation	300,000	500,000	60%	unknown	NGN 1.00
J. RAY MCDERMOTT HOLDINGS, LLC	OPI VESSELS, INC.	Corporation	20	20	100%	6	US \$0.10
MCDERMOTT ASIA PACIFIC PTE. LTD.	P. T. MCDERMOTT INDONESIA	Corporation	8,497 Class A	17,340 Class A 9,201 Class B	32%	1A	Rp. 918,800.00
MCDERMOTT ASIA PACIFIC PTE. LTD. (f/k/a J. RAY MCDERMOTT ASIA PACIFIC PTE. LTD.)	PT. BAJA WAHANA INDONESIA (f/k/a P. T. BABCOCK & WILCOX INDONESIA)	Corporation	10,494	10,600	99%	1	Rp. 994,000
MCDERMOTT ASIA PACIFIC PTE. LTD. (f/k/a J. RAY MCDERMOTT ASIA PACIFIC PTE. LTD.)	PT. J. RAY MCDERMOTT INDONESIA	Corporation	750,000	1,000,000	75%	6	Rp. 7.790

<u>Grantor</u>	<u>Issuer</u>	<u>Type of Organization</u>	<u># of Shares Owned</u>	<u>Total Shares Outstanding</u>	<u>% of Interest Pledged</u>	<u>Certificate No.</u>	<u>Par Value</u>
J. RAY MCDERMOTT (QINGDAO) PTE. LTD.	QINGDAO MCDERMOTT WUCHUAN ENGINEERING CO., LTD.	Corporation	50%	N/A	50%	Uncertificated	No Par
J. RAY MCDERMOTT UNDERWATER SERVICES, INC.	SERVICIOS DE FABRICACION DE ALTAMIRA, S.A. DE C.V.	Corporation	49,999	50,000	>99%	1	1.00 Mexican Peso
J. RAY MCDERMOTT INTERNATIONAL, INC.			1		<1%	2	
J. RAY MCDERMOTT UNDERWATER SERVICES, INC.	SERVICIOS PROFESIONALES DE ALTAMIRA, S.A. DE C.V.	Corporation	49,999	50,000	≥ 99%	1	1.00 Mexican Peso
J. RAY MCDERMOTT INTERNATIONAL, INC.			1		≤ 1%	2	
J. RAY MCDERMOTT (QINGDAO) PTE. LTD.	SINGAPORE HUANGDAO PTE. LTD.	Corporation	1	1	100%	2	SGD 1.00
SPARTEC, INC.	SPARS INTERNATIONAL, INC.	Corporation	0 (Class A) 5000 (Class B)	5000 (Class A) 5000 (Class B)	50%	2B	US \$0.01
MCDERMOTT, INC.	SPARTEC, INC.	Corporation	1,000	1,000	100%	4	US \$1.00
J. RAY MCDERMOTT INTERNATIONAL, INC.	VARSY INTERNATIONAL N.V.	Corporation	6,000 (Pref.)	6,000	100%	4	US \$1.00
			1 (Common)	1		5	
SHAW GROUP UK LIMITED	AITON & CO LIMITED	Corporation	1	1	100%	N/A	£1/share
CB&I SINGAPORE PTE. LTD.	ARABIAN CBI CO. LTD.	Corporation	100	400	25%	UNKNOWN	SR 5,000 /share
CHICAGO BRIDGE & IRON COMPANY B.V.			300		75%		
CB&I SINGAPORE PTE. LTD.	ARABIAN CBI TANK MANUFACTURING CO. LTD.	Corporation	100	400	25%	UNKNOWN	SR 9,250 /share
CHICAGO BRIDGE & IRON COMPANY B.V.			300		75%		
CHICAGO BRIDGE & IRON COMPANY, AN ILLINOIS CORPORATION	ASIA PACIFIC SUPPLY CO.	Corporation	100	100	100%	2	USD \$10/share
CHICAGO BRIDGE & IRON COMPANY, AN ILLINOIS CORPORATION	ATLANTIS CONTRACTORS INC.	Corporation	100	100	100%	3	0
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	BLUE WATER TECHNOLOGIES, INC.	Corporation	12,000,000	12,000,000	100%	152	Unknown

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CB&I INTERNATIONAL, INC.	CB&I BRAZIL HOLDINGS, INC.	Corporation	100	100	100%	2	UNKNO WN
CB&I POWER COMPANY B.V.	CB&I CANADA LTD	Corporation	100	100	100%	N/A	USD \$1/share
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	CB&I CLEARFIELD, INC.	Corporation	10,000,000 – Common	10,000,000	100%	81	USD \$0.01/shar e
CB&I GROUP INC.	CB&I COJAFEX B.V.	Corporation	4	4	100%	N/A	€226.89/s hare
CB&I GROUP INC.	CB&I CONNECTICUT, INC.	Corporation	200	200	100%	N/A	No par
CB&I HOLDINGS (UK) LIMITED	CB&I CONSTRUCTORS LIMITED	Corporation	163,536	163,536	100%	N/A	£1/share
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	CB&I EL DORADO, INC.	Corporation	520	520	100%	11	USD \$1/share
CB&I POWER INTERNATIONAL, INC.	CB&I ENGINEERING (THAILAND) LTD.	Limited Company	73,497	150,000	48.998%	UNKNOWN	N/A
CB&I EUROPE B.V.	CB&I ENGINEERING AND CONSTRUCTION CONSULTANT (SHANGHAI) CO., LTD.	Limited Liability Company	140,000	140,000	100%	UNKNOWN	N/A
CB&I POWER COMPANY B.V.	CB&I EUROPE B.V.	Corporation	18,152	18,152	100%	N/A	EUR 1.00
CHICAGO BRIDGE & IRON COMPANY B.V.	CB&I FINANCE COMPANY LIMITED	Corporation	2	2	100%	UNKNOWN	€1/share
CB&I SINGAPORE PTE. LTD.	CB&I GLOBAL OPERATIONS INTERNATIONAL PTE. LTD.	Corporation	1	1	100%	1	N/A
CB&I SINGAPORE PTE. LTD.	CB&I GLOBAL OPERATIONS US PTE. LTD.	Corporation	9	10	90%	1	N/A
CHICAGO BRIDGE & IRON COMPANY			1		10%		
CHICAGO BRIDGE & IRON COMPANY	CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	Corporation	84,961,999 – common 999,999 – preferred	84,961,999 – common 999,999 – preferred	100%	3	0
CB&I GLOBAL, L.L.C.	CB&I GROUP UK HOLDINGS	Corporation	27,426,306	27,426,306	100%	N/A	£.3781/sh are
CHICAGO BRIDGE & IRON COMPANY B.V.	CB&I HOLDINGS (UK) LIMITED	Corporation	1,000,002	1,000,002	100%	N/A	£1/share
COMET II B.V.	CB&I HOLDINGS B.V.	Corporation	1,800,000	1,800,000	100%	N/A	€0.01/shar e

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CB&I OIL & GAS EUROPE B.V.	CB&I INDIA PRIVATE LIMITED	Private Limited Company	47,038,237	47,513,370	99.00001%	1-9	Rs.10
CHICAGO BRIDGE & IRON COMPANY B.V.			475,133		0.99999%		
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	CB&I INTERNATIONAL, INC.	Corporation	1,000	1,000	100%	2	No par
CB&I OIL & GAS EUROPE B.V.	CB&I KOREA LIMITED (YUHANHOESA)	Corporation	50,000	50,000	100%	UNKNOWN	1,000
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	CB&I LAURENS, INC.	Corporation	1,000	1,000	100%	2	USD \$100/share
CB&I PADDINGTON LIMITED	CB&I LONDON	Corporation	1	1	100%	N/A	\$1/share
CB&I GROUP INC.	CB&I LUMMUS LTDA.	Limited Liability Company	68,988,518	68,988,520	99.000007%	NOT ISSUED	-
CB&I HOLDCO, LLC			2		.000003%		
MCDERMOTT TECHNOLOGY (2), B.V.	CB&I LUMMUS ENGINEERING & TECHNOLOGY CHINA CO. LTD.	Corporation	N/A	N/A	100%	N/A	N/A
CB&I RIO GRANDE HOLDINGS, L.L.C.	CB&I MATAMOROS, S. DE R.L. DE C.V.	Variable Capital Limited Liability Company	N/A	N/A	1%	N/A	N/A
CB&I RIO GRANDE VALLEY FABRICATION & MANUFACTURING, L.L.C.			N/A		99%	N/A	
CB&I HOLDCO, LLC	CB&I MASSACHUSETTS, INC.	Corporation	1000	1000	100%	1	0
CB&I OIL & GAS EUROPE B.V.	CB&I MAURITIUS	Limited Liability Company	10	10	100%	UNKNOWN	1.00
CB&I HOLDCO, LLC	CB&I MICHIGAN, INC.	Corporation	1000	1000	100%	2	0
CB&I INTERNATIONAL, INC.	CB&I MIDDLE EAST HOLDING, INC.	Corporation	100	100	100%	3,4	USD \$1/share
SHAW OVERSEAS (MIDDLE EAST) LTD.	CB&I NASS PIPE FABRICATION W.L.L.	Private Limited Company	-	BD2,840,000	49% of capital	N/A	N/A
CB&I OIL & GAS EUROPE B.V.	CB&I NEDERLAND B.V.	Corporation	54,454	54,454	100%	N/A	N/A

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CHICAGO BRIDGE & IRON COMPANY B.V. CB&I EUROPE B.V.	CB&I (NIGERIA) LIMITED	Private Limited Company	4,999,999 1	5,000,000	99.99998% .00002%	317009	N 1.00
CB&I HOLDCO, LLC	CB&I NORTH CAROLINA, INC.	Corporation	330	330	100%	2	USD \$100/share
CB&I ENERGY SERVICES, LLC	CB&I OFFSHORE SERVICES, INC.	Corporation	1500	1,000,000	100%	1	0
CHICAGO BRIDGE & IRON COMPANY B.V.	CB&I OIL & GAS EUROPE B.V.	Corporation	225	225	100%	N/A	EUR100/share
CB&I TYLER LLC	CB&I PADDINGTON LIMITED	Corporation	1	1	100%	12	\$1/share
CHICAGO BRIDGE & IRON COMPANY B.V.	CB&I POWER COMPANY B.V.	Corporation	42,889,195	42,889,195	100%	N/A	EUR0.23/share
CB&I INTERNATIONAL, INC.	CB&I POWER INTERNATIONAL, INC.	Corporation	1,000	1,000	100%	2	0
CB&I OIL & GAS EUROPE B.V.	CB&I POWER LIMITED	Corporation	172	172	100%	N/A	£1/share
CB&I OIL & GAS EUROPE B.V.	CB&I RUSLAND B.V.	Corporation	18,000	18,000	100%	N/A	€1/share
CB&I OIL & GAS EUROPE B.V.	CB&I S.R.O.	Corporation	100,000	100,000	100%	UNKNOWN	UNKNOWN
CB&I OIL & GAS EUROPE B.V.	CB&I SINGAPORE PTE. LTD.	Stock Corporation	527,802	527,802	100%	13	N/A
CB&I MIDDLE EAST HOLDING, INC. CB&I NASS PIPE FABRICATION W.L.L.	CB&I SKE&C MIDDLE EAST LTD.	Corporation	26,500 3,000	50,000	53% 6%	UNKNOWN	N/A
CBI COMPANY B.V.	CB&I UK LIMITED	Corporation	127,704,958	127,704,958	100%	N/A	£1/share
LUMMUS TECHNOLOGY LLC (F/K/A CB&I TECHNOLOGY INC.) REVISED: ABB LUMMUS GLOBAL INC.	LUMMUS TECHNOLOGY INTERNATIONAL LLC (F/K/A CB&I TECHNOLOGY INTERNATIONAL CORPORATION)	Corporation	100	100	100%	1	0

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LUMMUS TECHNOLOGY LLC (F/K/A CB&I TECHNOLOGY INC.)	LUMMUS TECHNOLOGY OVERSEAS LLC (F/K/A CB&I TECHNOLOGY OVERSEAS CORPORATION)	Corporation	100	100	100%	3	0
LUMMUS TECHNOLOGY LLC (F/K/A CB&I TECHNOLOGY INC.)	CB&I TECHNOLOGY VENTURES, INC.	Corporation	100	100	100%	1	No par
CB&I NEDERLAND B.V.	CB&I-CTCI B.V.	Corporation	1	1	50%	N/A	N/A
CHICAGO BRIDGE & IRON COMPANY, A DELAWARE CORPORATION	CBI AMERICAS LTD.	Corporation	10,000	10,000	100%	1	No par
CHICAGO BRIDGE & IRON COMPANY B.V.	CBI ARUBA N.V.	Limited Company	100	100	100%	1	AWG \$100/share
CHICAGO BRIDGE & IRON (ANTILLES) N.V.	CBI BAHAMAS LIMITED	Limited Liability Company	5000	5000	100%	3	\$1.00
CHICAGO BRIDGE & IRON COMPANY, AN ILLINOIS CORPORATION	CBI CARIBE, LIMITED	Corporation	10 – Certificate 1 2118 – Certificate 2	2,128	100%	1, 2	USD \$100/share
CB&I OIL & GAS EUROPE B.V.	CBI CLOUGH JV PTE. LTD.	Corporation	N/A	N/A	65%	N/A	N/A
CHICAGO BRIDGE & IRON COMPANY B.V. CBI BAHAMAS LIMITED	CBI COLOMBIANA S.A.	Corporation	218,428,651 11,496,350	229,927,001	95% 5%	8, 9, 10	1 peso/share
CBI COMPANY TWO B.V.	CBI COMPANY B.V.	Corporation	100	100	100%	N/A	EUR 0.01
CHICAGO BRIDGE & IRON COMPANY, AN ILLINOIS CORPORATION	CBI COMPANY LTD.	Corporation	5,310	5,310	100%	4	No par
CB&I OIL & GAS EUROPE B.V.	CBI COMPANY TWO B.V.	Corporation	100	100	100%	N/A	EUR 0.01
CHICAGO BRIDGE & IRON (ANTILLES) N.V.	CBI CONSTRUCTORS (JEBEL ALI) FZE (UAE)	Free Zone Establishment with Limited Liability	1	1	100%	1	DHS 1,000,000 Dirhams
CHICAGO BRIDGE & IRON COMPANY B.V.	CBI CONSTRUCTORS PTY. LTD.	Corporation	302,623	302,623	100%	13	USD \$1/share
CHICAGO BRIDGE & IRON COMPANY B.V.	CBI CONSTRUCTORS S.A. (PROPRIETARY) LTD.	Proprietary Limited Company	263,000	263,000	100%	20	R2/each

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CHICAGO BRIDGE & IRON COMPANY B.V.	CBI COSTA RICA, S.A.	Corporation	1980	2000	99%	1	CRC 2,000
CB&I POWER COMPANY B.V.	CBI COSTA RICA, S.A.	Corporation	20	2000	1%	3	CRC 2,000
CHICAGO BRIDGE & IRON COMPANY, AN ILLINOIS CORPORATION	CBI DE VENEZUELA C.A.	Limited Company Corporation	25,050	25,050	100%	3, 4	0.1 Bolivar Fuerte
CHICAGO BRIDGE & IRON COMPANY B.V.	CBI DOMINICANA SRL	Corporation	6899	6900	99.985%	UNKNOWN	UNKNO WN
CB&I EUROPE B.V.			1		.00014493 %		
CHICAGO BRIDGE & IRON (ANTILLES) N.V.	CBI EASTERN ANSTALT	Corporation	1	1	100%	Uncertificated	20,000 Swiss Francs/sh are
CBI US HOLDING COMPANY INC.	CBI HOLDCO TWO INC.	Corporation	60 – Common 580 – Series A 900 – Series B 520 – Series C 550 – Series D	60 – Common 580 – Series A 900 – Series B 520 – Series C 550 – Series D	100% 100%	1 – Common UNKNOWN Preferred	No par
CHICAGO BRIDGE & IRON COMPANY B.V.	CBI JAMAICA LIMITED	Limited Company	5000	5000	100%	2	1.00
CHICAGO BRIDGE & IRON COMPANY B.V.	CBI (MALAYSIA) SDN. BHD.	Corporation	1,121,000	1,121,000	100%	UNKNOWN	UNKNO WN
CHICAGO BRIDGE & IRON (ANTILLES) N.V.	CBI MONTAJES DE CHILE LIMITADA (2)	Limited Liability Company	1% of capital (CH 10 99% of capital (CH 990	1000	1% 99%	N/A	N/A
CBI COMPANY LTD.	CBI DE NICARAGUA, S.A.	Corporation	998	1,000	99.8%	UNKNOWN	UNKNO WN
CBI CARIBE, LIMITED			1		.1%		
CHICAGO BRIDGE & IRON COMPANY (IL)			1		.1%		

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CB&I INTERNATIONAL, INC.	CBI OVERSEAS (FAR EAST) INC.	Corporation	100	218	45.81%	1	UNKNO WN
CBI UK CAYMAN ACQUISITION LIMITED			118		54.19%	2	
CHICAGO BRIDGE & IRON COMPANY B.V.	CBI PERUANA SAC	Closely held corporation	4999	5000	99%	UNKNOWN	S/.1.00
CHICAGO BRIDGE & IRON (ANTILLES) N.V.			1		<1%		
CHICAGO BRIDGE & IRON COMPANY B.V.	CBI PANAMA, S.A.	Corporation	1,000	1,000	100%	UNKNOWN	USD \$1/share
CHICAGO BRIDGE & IRON COMPANY B.V.	CBI (PHILIPPINES) INC	Corporation	1,199,994	2,000,000	60%	45, 48, 63	UNKNO WN
CHICAGO BRIDGE & IRON COMPANY B.V.	CBI (THAILAND) LIMITED	Limited Company	499,999	1,000,000	49.99%	4-6260, 12501, 506, 250, 1, 2	100 BAHT
CB&I INTERNATIONAL, INC.	CBI UK CAYMAN ACQUISITION LTD.	Corporation	299,488,000	299,488,000	100%	N/A	USD \$1/share
CB&I (US) HOLDINGS, LIMITED	CBI US HOLDING COMPANY INC.	Corporation	200 - Common 865 - Series A Preferred	200 - Common 865 - Series A Preferred	100% - Common 100% - Series A Preferred	N/A	No par
CHICAGO BRIDGE & IRON COMPANY B.V.	CBI VENEZOLANA S.A.	Public Limited Company	25,524,836	25,524,836	100%	No certificates in Venezuela	1 Bolivar Fuerte each
CB&I OIL & GAS EUROPE B.V.	CCS NETHERLANDS B.V.	Incorporated JV	Class B 100	Class B 100	33.33%	N/A	EUR 1.00
CHICAGO BRIDGE & IRON COMPANY, AN ILLINOIS CORPORATION	CENTRAL TRADING COMPANY LTD.	Corporation	1,000	1,000	100%	2	USD \$1/share
CHICAGO BRIDGE & IRON COMPANY B.V.	CHICAGO BRIDGE & IRON (ANTILLES) N.V.	Corporation	6,000	6,000	100%	N/A	USD \$1/share
CHICAGO BRIDGE & IRON COMPANY, A DELAWARE CORPORATION	CHICAGO BRIDGE & IRON COMPANY (DELAWARE)	Corporation	1,000	1,000	100%	5	USD \$1/share

Grantor	Issuer	Type of Organization	# of Shares Owned	Total Shares Outstanding	% of Interest Pledged	Certificate No.	Par Value
CBI HOLDCO TWO INC.	CHICAGO BRIDGE & IRON COMPANY, A DELAWARE CORPORATION	Corporation	100	100	100%	1	No par
CHICAGO BRIDGE & IRON COMPANY, A DELAWARE CORPORATION	CHICAGO BRIDGE & IRON COMPANY, AN ILLINOIS CORPORATION	Corporation	1,000	1,000	100%	5	USD \$1/share
LEALAND FINANCE COMPANY B.V.	CHICAGO BRIDGE & IRON COMPANY B.V.	Corporation	50	50	100%	N/A	EUR 455
CHICAGO BRIDGE & IRON COMPANY B.V.	CHICAGO BRIDGE & IRON URUGUAY S.A.	Corporation	262,500	262,500	100%	UNKNOWN	1 – Uruguayan Pesos
CHICAGO BRIDGE & IRON (ANTILLES) N.V.	CHICAGO BRIDGE DE MEXICO, S.A. DE C.V.	Corporation	1	1,000	0.1%	3B	M.N. 50/share
CHICAGO BRIDGE & IRON COMPANY B.V.			999		99.9%	5B	
CB&I EUROPE B.V.	CHICAGO BRIDGE SERVICIOS PETROLEROS S.A. (BOLIVIA)	Corporation	1	35	2.857%	4	BS100
CB&I POWER COMPANY B.V.			1		2.857%		
CHICAGO BRIDGE & IRON COMPANY B.V.			33		94.286%		
MCDERMOTT TECHNOLOGY, B.V.	COMET II B.V.	Corporation	1	1	100%	N/A	EUR 0.01
CBI COMPANY LTD.	CONSTRUCTORA C.B.I. LIMITADA	Limited Company	202,950	205,000	99%	UNKNOWN	UNKNO WN
CHICAGO BRIDGE & IRON COMPANY	CONSTRUCTORA C.B.I. LIMITADA	Limited Company	2,050	205,000	1%	UNKNOWN	1 Chilean pesos
CHICAGO BRIDGE & IRON COMPANY, A DELAWARE CORPORATION	CSA TRADING COMPANY LTD.	Corporation	10,000	10,000	100%	1	No par
ENVIRONMENTAL SOLUTIONS HOLDING LTD.	ENVIRONMENTAL SOLUTIONS (CAYMAN) LTD.	Corporation	100	100	100%	UNKNOWN	USD \$1/share
SHAW HOME LOUISIANA, LLC	ENVIRONMENTAL SOLUTIONS HOLDING LTD.	Corporation	100	100	100%	1	USD \$1/share

Grantor	Issuer	Type of Organization	# of Shares Owned	Total Shares Outstanding	% of Interest Pledged	Certificate No.	Par Value
ENVIRONMENTAL SOLUTIONS (CAYMAN) LTD.	ENVIRONMENTAL SOLUTIONS LTD.	Corporation	100	100	100%	1	USD \$1/share
ENVIRONMENTAL SOLUTIONS LTD.	ENVIRONMENTAL SOLUTIONS OF EQUADOR S.A.	Private Limited Company	N/A	N/A	99.875%	UNCERTAIN	USD \$1.00
CHICAGO BRIDGE & IRON COMPANY, A DELAWARE CORPORATION	FIBRE MAKING PROCESSES, INC.	Corporation	750	750	100%	82	USD \$100/share
CHICAGO BRIDGE & IRON COMPANY, AN ILLINOIS CORPORATION	HIGHLAND TRADING COMPANY, LTD.	Corporation	2	2	100%	2	USD \$1/share
CB&I INTERNATIONAL, INC.	HOLDING MANUFACTURAS SHAW SOUTH AMERICA, C.A.	Corporation	50	50	100%	1	N/A
CHICAGO BRIDGE & IRON COMPANY	HORTON CBI, LIMITED	Corporation	14	64,981	0.0215%	8	USD \$10/share
CHICAGO BRIDGE & IRON COMPANY B.V.			64,967		99.978%		
HOWE-BAKER HOLDINGS, LLC	HOWE-BAKER ENGINEERS, LTD.	Texas Limited Partnership	N/A	N/A	99%	N/A	N/A
HOWE-BAKER MANAGEMENT, L.L.C.					1%		
COMET II B.V.	LEALAND FINANCE COMPANY B.V.	Corporation	18,152	18,152	100%	N/A	EUR 1.00
CB&I NEDERLAND B.V.	LUMMUS ARABIA LTD. CO.	Corporation	33,250	35,000	95%	UNKNOWN	SR 100/share
CB&I SINGAPORE PTE. LTD.			1,750		5%		
MCDERMOTT TECHNOLOGY (2), B.V.	LUMMUS CONSULTANTS INTERNATIONAL LIMITED	Corporation	1	1	100%	2	£1/share
MCDERMOTT TECHNOLOGY (2), B.V.	LUMMUS NOVOLEN TECHNOLOGY GMBH (F/K/A CB&I LUMMUS GMBH)	Corporation	2,600,000	2,600,000	100%	1-7	DEM 2,600,000
LUMMUS TECHNOLOGY LLC	LUMMUS TECHNOLOGY B.V.	Corporation	200	200	100%	N/A	€100/share

Grantor	Issuer	Type of Organization	# of Shares Owned	Total Shares Outstanding	% of Interest Pledged	Certificate No.	Par Value
MCDERMOTT TECHNOLOGY (2), B.V.	LUMMUS TECHNOLOGY HEAT TRANSFER B.V.	Corporation	4,538	4,538	100%	N/A	€100/share
CB&I OIL & GAS EUROPE B.V.	LUTECH PROJECT SOLUTIONS B.V.	Corporation	1	1	100%	N/A	EUR 1.00
CB&I OIL & GAS EUROPE B.V.	LUTECH PROJECTS B.V.	Corporation	1	1	100%	N/A	EUR 1.00
CB&I OIL & GAS EUROPE B.V.	LUTECH RESOURCES B.V.	Corporation	180	180	100%	N/A	€100/share
CHICAGO BRIDGE & IRON COMPANY B.V.	LUTECH RESOURCES CANADA LTD.	Corporation	100	100	100%	UNKNOWN	No par
CHICAGO BRIDGE & IRON COMPANY, A DELAWARE CORPORATION	LUTECH RESOURCES INC.	Corporation	1,000	1,000	100%	2	UNKNOWN
CHICAGO BRIDGE & IRON COMPANY B.V.	LUTECH RESOURCES INDIA PRIVATE LIMITED	Limited Liability Company	28,951	2,897,385	0.999211%	Unknown	RS 10/each
CB&I OIL & GAS EUROPE B.V.			2,868,434		99.0007898%	Unknown	
CB&I OIL & GAS EUROPE B.V.	LUTECH RESOURCES LIMITED	Corporation	2,501,000	2,501,000	100%	N/A	GBP1/each
CB&I OIL & GAS EUROPE B.V.	LUTECH RESOURCES CZECH REPUBLIC S.R.O.	Limited Liability Company	90% ownership interest	N/A	90%	N/A (represented in percentages in CR)	CZK 180,000
CB&I NEDERLAND B.V.			10% ownership interest		10%		CZK 20,000
CB&I INTERNATIONAL, INC.	MANUFACTURAS SHAW SOUTH AMERICA, C.A. (VENEZUELA)	Corporation	1,642	1,642	100%	N/A	224.6037 Bolivar Fuerte
HOWE-BAKER INTERNATIONAL MANAGEMENT, LLC	MATRIX ENGINEERING, LTD.	Limited Partnership	N/A	N/A	0.10%	N/A	N/A
HOWE-BAKER HOLDINGS, L.L.C.					99.90%		
CB&I OIL & GAS EUROPE B.V.	NETHERLANDS OPERATING COMPANY B.V.	Corporation	182	182	100%	N/A	£100/share

Grantor	Issuer	Type of Organization	# of Shares Owned	Total Shares Outstanding	% of Interest Pledged	Certificate No.	Par Value
CHICAGO BRIDGE & IRON COMPANY, AN ILLINOIS CORPORATION	OASIS SUPPLY COMPANY, LTD	Corporation	2	2	100%	2	USD \$1/share
CHICAGO BRIDGE & IRON COMPANY, AN ILLINOIS CORPORATION	OCEANIC CONTRACTORS, INC.	Corporation	45,720	45,720	100%	15	USD \$10/share
MCDERMOTT TECHNOLOGY (2), B.V.	OOO LUMMUS TECHNOLOGY	Corporation	1	1	100%	UNKNOWN	UNKNO WN
CB&I CONSTRUCTORS LIMITED	OXFORD METAL SUPPLY LIMITED	Corporation	100	100	100%	N/A	£1/share
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	PIKE PROPERTIES II, INC.	Corporation	1,000	1,000	100%	3	No par
CB&I GROUP UK HOLDINGS	PIPEWORK ENGINEERING AND DEVELOPMENTS LIMITED	Corporation	10,000	10,000	100%	N/A	£1/share
SHAW POWER SERVICES, LLC	PROSPECT INDUSTRIES (HOLDINGS) INC.	Corporation	341	341	100%	7	USD \$1/share
CHICAGO BRIDGE & IRON COMPANY B.V.	P.T. CHICAGO BRIDGE AND IRON	Limited Liability Company	1573	1656	100%	unknown	N/A
CB&I HOLDCO INTERNATIONAL, LLC	PT STONE & WEBSTER INDONESIA	Limited Liability Company	30	40	100%	unknown	N/A
CB&I INTERNATIONAL, INC.	SHAW ASIA COMPANY, LIMITED (THAILAND)	Joint Venture	50%	n/a	50%	unknown/A	N/A
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	SHAW BENECO, INC.	Corporation	1,000	100,000	100%	2	N/A
PROSPECT INDUSTRIES (HOLDINGS) INC.	SHAW CONNEX, INC.	Corporation	1,000	1,000	100%	4	N/A
CB&I GROUP UK HOLDINGS	SHAW DUNN LIMITED	Corporation	2	2	100%	N/A	£1/share
CB&I INTERNATIONAL, INC.	SHAW E&I INTERNATIONAL LTD.	Corporation	17,000 – Certificate 3 Unsure of other 33,000	50,000	100%	3	USD \$1/share
SHAW TRANSMISSION & DISTRIBUTION SERVICES, INC.	SHAW ENERGY SERVICES, INC.	Corporation	1,000	1,000	100%	1	UNKNO WN

<u>Grantor</u>	<u>Issuer</u>	<u>Type of Organization</u>	<u># of Shares Owned</u>	<u>Total Shares Outstanding</u>	<u>% of Interest Pledged</u>	<u>Certificate No.</u>	<u>Par Value</u>
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	SHAW FABRICATORS, INC.	Corporation	1,000	1,000	100%	1	No par
CB&I GROUP UK HOLDINGS	SHAW GROUP UK LIMITED	Corporation	18,850,002	18,850,002	100%	N/A	GBP1/each
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	SHAW GRP OF CALIFORNIA	Corporation	1,000	1,000	100%	1	No par
CB&I INTERNATIONAL, INC.	SHAW INTERNATIONAL, INC.	Corporation	1,000	2,150	100%	1	No par
CBI UK CAYMAN ACQUISITION LIMITED			1150			2	
CB&I INTERNATIONAL, INC.	SHAW INTERNATIONAL MANAGEMENT SERVICES TWO, INC.	Corporation	1,000	1,000	100%	3, 4	No par
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	SHAW MANAGEMENT SERVICES ONE, INC.	Corporation	1,000	1,000	100%	1	No par
SHAW TRANSMISSION & DISTRIBUTION SERVICES, INC.	SHAW NC COMPANY, INC.	Corporation	100	100	100%	3	USD \$1/share
SHAW TRANSMISSION & DISTRIBUTION SERVICES, INC.	SHAW NUCLEAR ENERGY HOLDINGS (UK), INC.	Corporation	1,000	1,000	100%	1	N/A
CB&I INTERNATIONAL, INC.	SHAW OVERSEAS (MIDDLE EAST) LTD.	Corporation	100	100	100%	3 & 4	N/A
CB&I INTERNATIONAL, INC.	SHAW PACIFIC PTE. LTD. (SINGAPORE)	Corporation	1	1	100%	2	UNKNOWN
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	SHAW POWER DELIVERY SYSTEMS, INC.	Corporation	1,000	1,000	100%	1	No par
LUMMUS TECHNOLOGY LLC	SHAW POWER TECHNOLOGIES, INC.	Corporation	1,000	1,000	100%	UNKNOWN	N/A
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	SHAW PROCESS FABRICATORS, INC.	Corporation	1,000	1,000	100%	7	No par
CB&I INTERNATIONAL, INC.	SHAW OVERSEAS (MIDDLE EAST) LTD. (CAYMAN ISLANDS)	Corporation	66	100	80%	3	USD \$1/share
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	SHAW SSS FABRICATORS, INC.	Corporation	1,000	1,000	100%	1	No par

<u>Grantor</u>	<u>Issuer</u>	<u>Type of Organization</u>	<u># of Shares Owned</u>	<u>Total Shares Outstanding</u>	<u>% of Interest Pledged</u>	<u>Certificate No.</u>	<u>Par Value</u>
CB&I INTERNATIONAL, INC.	SHAW STONE & WEBSTER ARABIA CO., LTD. (SAUDI ARABIA)	Corporation	1600	2000	100%	unknown	1,000 Saudi Riyal
SHAW TRANSMISSION & DISTRIBUTION SERVICES, INC.	SHAW TRANSMISSION & DISTRIBUTION SERVICES INTERNATIONAL, INC.	Corporation	1	1	100%	1	N/A
SHAW POWER DELIVERY SYSTEMS, INC.	SHAW TRANSMISSION & DISTRIBUTION SERVICES, INC.	Corporation	1,000	1,000	100%	unknown	N/A
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	SHAW TULSA FABRICATORS, INC.	Corporation	1,000	1000	100%	3	USD \$1/share
SHAW GROUP UK LIMITED	THE SHAW GROUP UK 1997 PENSION SCHEME LIMITED	Corporation	2	2	100%	N/A	£1/share
SHAW GROUP UK LIMITED	THE SHAW GROUP UK 2001 PENSION PLAN LIMITED	Corporation	2	2	100%	N/A	£1/share
SHAW GROUP UK LIMITED	THE SHAW GROUP UK PENSION PLAN LIMITED	Corporation	1	1	100%	2	£1/share
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	TVL LENDER II, INC.	Corporation	99	99	100%	1	USD \$1/share
SHAW GROUP UK LIMITED	WHESOE PIPING SYSTEMS LIMITED	Corporation	1	1	100%	N/A	£1/share
CB&I OIL & GAS EUROPE B.V.	CB&I LUMMUS DEUTSCHLAND GMBH	Corporation	1	1	100%	N/A	N/A
COMET II B.V.	CB&I (US) HOLDINGS, LIMITED	Limited Company	127,704,958	127,704,958	100%	1	£1/share
CBI (US) HOLDING COMPANY, INC.	J. RAY HOLDINGS, INC.	Corporation	1000	1000	100%	4	No par

Pledged LLC Interests:

<u>Grantor</u>	<u>Issuer</u>	<u>Type of Organization</u>	<u>% of Interest Owned</u>	<u>Total Shares Outstanding</u>	<u>% of Interest Pledged</u>	<u>Certificate No.</u>	<u>Par Value</u>
J. RAY MCDERMOTT HOLDINGS, LLC	DEEPSEA (AMERICAS) LLC	LLC	100%	N/A	100%	Uncertificated	N/A

<u>Grantor</u>	<u>Issuer</u>	<u>Type of Organization</u>	<u>% of Interest Owned</u>	<u>Total Shares Outstanding</u>	<u>% of Interest Pledged</u>	<u>Certificate No.</u>	<u>Par Value</u>
J. RAY MCDERMOTT, S. A.	DEEPWATER MARINE TECHNOLOGY, L.L.C.	LLC	100%	200	50%	Uncertificated	US\$1.00
J. RAY MCDERMOTT SOLUTIONS, INC.	FLOATEC, LLC	LLC	50%	N/A	50%	Uncertificated	N/A
MCDERMOTT OFFSHORE SERVICES COMPANY, INC.	FLOATEC OFFSHORE SERVICOS DE PETROLEO DO BRASIL LTDA	LLC	250,000	500,000	50%	Uncertificated	\$1,00 Brazilian Real
MCDERMOTT MARINE CONSTRUCTION LIMITED	IO OIL & GAS MANAGEMENT LLC	LLC	50%	N/A	50%	N/A	N/A
MCDERMOTT BLACKBIRD HOLDINGS, LLC	IO OIL & GAS US LLC	LLC	50%	N/A	50%	N/A	N/A
J. RAY HOLDINGS, INC.	J. RAY MCDERMOTT HOLDINGS, LLC	LLC	100%	N/A	100%	Uncertificated	N/A
OPI VESSELS, INC.	J. RAY MCDERMOTT INTERNATIONAL VESSELS, LTD.	LLC	100	100	100%	7	US \$0.01
MCDERMOTT, INC.	MCDERMOTT BLACKBIRD HOLDINGS, LLC	LLC	100% Ownership Interest	N/A	100%	N/A	N/A
MCDERMOTT INTERNATIONAL MANAGEMENT, S. DE RL.	MCDERMOTT CAYMAN LTD.	LLC	1,000	1,000	100%	3	US \$0.01
J. RAY MCDERMOTT SOLUTIONS, INC.	MCDERMOTT ENGINEERING, LLC	LLC	100%	N/A	100%	Uncertificated	N/A
MCDERMOTT INTERNATIONAL, INC.	MCDERMOTT FINANCE L.L.C.	LLC	100%	N/A	100%	Uncertificated	N/A
MCDERMOTT INTERNATIONAL, INC.	MCDERMOTT INTERNATIONAL MANAGEMENT, S. DE RL.	LLC	999 Units	1,000 Units	99.9%	1	US\$1.00
MCDERMOTT CAYMAN LTD.			1 Unit		0.1%	2	
J. RAY HOLDINGS, INC.	MCDERMOTT INVESTMENTS, LLC	LLC	100%	N/A	100%	Uncertificated	N/A
MCDERMOTT, INC.	MCDERMOTT SERVIÇOS OFFSHORE DO BRASIL LTDA.	LLC	6,999,888,871 quotas	7,000,000,000 quotas	>99%	Uncertificated	R\$0.01
MCDERMOTT OVERSEAS, INC.			111,129 quotas		<1%	Uncertificated	R\$0.01

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J.RAY MCDERMOTT (NORWAY), AS	NORTH OCEAN 105 AS	LLC	100,000 Series A 19,000 Series B	100,000 Series A 19,000 Series B	100%	uncertificated	
MCDERMOTT MIDDLE EAST, INC.	QATAR FABRICATION COMPANY LLC	LLC	40%	N/A	40%	Uncertificated	N/A
MCDERMOTT, INC.	WD 140 PLATFORM LLC	LLC	45.00% Ownership	N/A	45%	Uncertificated	N/A
MCDERMOTT, INC.	OFFSHORE PIPELINES INTERNATIONAL, LTD.	LLC	1,100	1,100	100%	8	US \$0.01
CB&I GROUP INC.	850 PINE STREET LLC	LLC	100%	1,000	100%	2	N/A
SHAW HOME LOUISIANA, LLC	ATLANTIC CONTINGENCY CONSTRUCTORS II, LLC	LLC	60%	N/A	100%	N/A	N/A
CB&I PROJECT SERVICES GROUP, LLC	MOX SERVICES, LLC	LLC	70%	N/A	100%	N/A	N/A
CB&I NEDERLAND B.V.	CB&I CAIRO LLC	LLC	10%	144,050	10%	N/A	N/A
CB&I OIL & GAS EUROPE B.V.			90%		90%		
CB&I GROUP INC.	CB&I ENERGY SERVICES LLC	LLC	N/A	N/A	100%	N/A	N/A
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	CB&I FABRICATION, LLC	LLC	100%	N/A	100%	N/A	N/A
CHICAGO BRIDGE & IRON COMPANY, A DELAWARE CORPORATION	CB&I FINANCIAL RESOURCES, LLC	LLC	100%	N/A	100%	N/A	N/A
CB&I UK LIMITED	CB&I GLOBAL, LLC	LLC	100%	100	100%	3	N/A
CB&I HOLDCO, LLC	CB&I HOLDCO INTERNATIONAL, LLC	LLC	100%	N/A	100%	N/A	N/A
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	CB&I HOLDCO, LLC	LLC	100%	N/A	100%	N/A	N/A
CB&I UK LIMITED	CB&I HOUSTON LLC	LLC	100%	1	100%	2	N/A
CB&I UK LIMITED	CB&I HOUSTON 06 LLC	LLC	100%	1	100%	2	N/A
CB&I UK LIMITED	CB&I HOUSTON 07 LLC	LLC	100%	14,555,597	100%	2	N/A
CB&I UK LIMITED	CB&I HOUSTON 08 LLC	LLC	100%	14,555,597	100%	2	N/A

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CB&I UK LIMITED	CB&I HOUSTON 09 LLC	LLC	100%	14,395,135	100%	2	N/A
CB&I UK LIMITED	CB&I HOUSTON 10 LLC	LLC	100%	14,394,564	100%	2	N/A
CB&I UK LIMITED	CB&I HOUSTON 11 LLC	LLC	100%	14,434,526	100%	2	N/A
CB&I UK LIMITED	CB&I HOUSTON 12 LLC	LLC	100%	14,474,488	100%	3	N/A
CB&I UK LIMITED	CB&I HOUSTON 13 LLC	LLC	100%	1	100%	2	N/A
CHICAGO BRIDGE & IRON (ANTILLES) N.V.	CB&I HUNGARY HOLDING KFT	Limited Liability Company	N/A	N/A	96.67%	N/A	N/A
CHICAGO BRIDGE & IRON COMPANY B.V.			N/A	N/A	3.33%	N/A	N/A
CB&I INTERNATIONAL, INC.	CB&I INTERNATIONAL ONE, LLC	LLC	100%	N/A	100%	N/A	N/A
CB&I HOLDCO, LLC	CB&I INTERNATIONAL, LLC	LLC	100%	N/A	100%	N/A	N/A
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	CB&I LAKE CHARLES, LLC	LLC	100%	N/A	100%	N/A	N/A
CB&I HOLDCO, LLC	CB&I LLC	LLC	100%	N/A	100%	N/A	N/A
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	CB&I POWER, LLC	LLC	100%	1,000	100%	N/A	N/A
CB&I HOLDCO, LLC	CB&I PROJECT SERVICES GROUP, LLC	LLC	100%	N/A	100%	N/A	N/A
CB&I RIO GRANDE VALLEY FABRICATION & MANUFACTURING, L.L.C.	CB&I RIO GRANDE HOLDINGS, L.L.C.	LLC	100%	N/A	100%	N/A	N/A
SHAW POWER SERVICES, LLC	CB&I RIO GRANDE VALLEY FABRICATION & MANUFACTURING, L.L.C.	LLC	100%	N/A	100%	N/A	N/A
CHICAGO BRIDGE & IRON COMPANY	CB&I TYLER LLC	LLC	100%	N/A	100%	1	N/A
CB&I LLC	CB&I STORAGE TANK SOLUTIONS LLC	LLC	100%	N/A	100%	N/A	N/A
CHICAGO BRIDGE & IRON COMPANY	CB&I STS DELAWARE LLC	LLC	100%	N/A	100%	N/A	N/A

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CB&I FABRICATION, LLC	CB&I WALKER LA, L.L.C.	LLC	100%	N/A	100%	N/A	N/A
CB&I TYLER LLC	CB&I WOODLANDS LLC	LLC	100%	N/A	100%	N/A	N/A
CHICAGO BRIDGE & IRON (ANTILLES) N.V.	CBI OVERSEAS, LLC	LLC	100%	N/A	100%	N/A	N/A
CB&I HOLDCO, LLC	CBI SERVICES, LLC	LLC	100%	1	100%	N/A	N/A
CHICAGO BRIDGE & IRON COMPANY B.V.	CBIT I, LLC	LLC	100%	N/A	100%	N/A	N/A
CHICAGO BRIDGE & IRON COMPANY B.V.	CBIT II, LLC	LLC	100%	N/A	100%	N/A	N/A
CHICAGO BRIDGE & IRON COMPANY B.V.	CBIT III, LLC	LLC	100%	N/A	100%	N/A	N/A
CHICAGO BRIDGE & IRON COMPANY B.V.	CBIT IV, LLC	LLC	100%	N/A	100%	N/A	N/A
CB&I LLC	CCJV	JV	50%	N/A	100%	N/A	N/A
SHAW HOME LOUISIANA, LLC	CFS-KBR MARIANAS SUPPORT SERVICES LLC	LLC	50%	N/A	100%	N/A	N/A
LUMMUS TECHNOLOGY LLC (F/K/A CB&I TECHNOLOGY INC.)	CHEMICAL RESEARCH & LICENSING, LLC	LLC	100%	N/A	100%	N/A	N/A
LUMMUS TECHNOLOGY VENTURES, INC.	CHEVRON LUMMUS GLOBAL, LLC	LLC	50%	N/A	100%	N/A	N/A
CHICAGO BRIDGE & IRON COMPANY B.V.	CHICAGO BRIDGE & IRON COMPANY & CO LLC (OMAN)	LLC	70% - 175,000	250,000	100%	N/A	N/A
CHICAGO BRIDGE & IRON COMPANY B.V.	CHICAGO BRIDGE & IRON COMPANY & (EGYPT) LLC	LLC	80% - 1600	2000	100%	N/A	N/A
HOWE-BAKER INTERNATIONAL, L.L.C.	CONSTRUCTORS INTERNATIONAL, LLC	LLC	100%	N/A	100%	N/A	N/A
SHAW HOME LOUISIANA, LLC	CONVEY ALL BULK, LLC	LLC	50%	N/A	100%	N/A	N/A
SHAW HOME LOUISIANA, LLC	DISASTER RESPONSE SOLUTIONS, LLC	LLC	30%	N/A	100%	N/A	N/A
SHAW TRANSMISSION & DISTRIBUTION SERVICES, INC.	EDS EQUIPMENT COMPANY, LLC	LLC	100%	N/A	100%	N/A	N/A

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SHAW HOME LOUISIANA, LLC	EMERGENCY RESPONSE SERVICES LLC	LLC	50%	N/A	100%	N/A	N/A
HOWE-BAKER INTERNATIONAL MANAGEMENT, LLC	HBI HOLDINGS, LLC	LLC	100%	N/A	100%	N/A	N/A
HOWE-BAKER INTERNATIONAL, L.L.C.	HOWE-BAKER HOLDINGS, LLC	LLC	100%	N/A	100%	N/A	N/A
HOWE-BAKER INTERNATIONAL, L.L.C.	HOWE-BAKER INTERNATIONAL MANAGEMENT, LLC	LLC	100%	N/A	100%	N/A	N/A
CB&I LLC	HOWE-BAKER INTERNATIONAL, L.L.C.	LLC	100%	N/A	100%	N/A	N/A
HOWE-BAKER HOLDINGS, L.L.C.	HOWE-BAKER MANAGEMENT, LLC	LLC	100%	N/A	100%	N/A	N/A
SHAW HOME LOUISIANA, LLC	INTEGRATED SITE SOLUTIONS, LLC	LLC	100%	N/A	100%	N/A	N/A
CB&I HOLDCO, LLC	INTERNATIONAL CONSULTANTS, LLC	LLC	100%	N/A	100%	N/A	N/A
LUMMUS TECHNOLOGY LLC	LUMMUS CONSULTANTS INTERNATIONAL LLC	LLC	100%	N/A	100%	2	N/A
LUMMUS TECHNOLOGY LLC	LUMMUS ENGINEERED PRODUCTS LLC	LLC	100%	N/A	100%	N/A	N/A
LUMMUS TECHNOLOGY LLC	LUMMUS GASIFICATION TECHNOLOGY LICENSING LLC	LLC	100%	N/A	100%	1	N/A
LUMMUS TECHNOLOGY LLC	LUMMUS TECHNOLOGY INTERNATIONAL LLC	LLC	100%	N/A	100%	1	N/A
MCDERMOTT TECHNOLOGY (AMERICAS), INC.	LUMMUS TECHNOLOGY LLC (F/K/A CB&I TECHNOLOGY INC.)	LLC	49.516%	N/A	49.516%	N/A	N/A
J. RAY HOLDINGS, INC.			.966%		.966%		
LUMMUS TECHNOLOGY, LLC			.966%		.966%		

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MCDERMOTT TECHNOLOGY (US), INC.	LUMMUS TECHNOLOGY LLC (F/K/A CB&I TECHNOLOGY INC.)	LLC	49.516%	N/A	49.516%	N/A	N/A
J. RAY HOLDINGS, INC.			.966%		.966%		
LUMMUS TECHNOLOGY, LLC			.966%		.966%		
LUMMUS TECHNOLOGY LLC	LUMMUS TECHNOLOGY OVERSEAS LLC	LLC	100%	N/A	100%	N/A	N/A
LUMMUS TECHNOLOGY LLC	LUMMUS TECHNOLOGY SERVICES LLC	LLC	100%	N/A	100%	N/A	N/A
LUMMUS TECHNOLOGY LLC	LUMMUS TECHNOLOGY VENTURES LLC	LLC	100%	N/A	100%	1	N/A
MATRIX ENGINEERING, LTD.	MATRIX MANAGEMENT SERVICES, LLC	LLC	100%	N/A	100%	N/A	N/A
MCDERMOTT TECHNOLOGY, LLC	MCDERMOTT TECHNOLOGY SUB, LLC	LLC	100%	1,099,999	100%	N/A	N/A
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	NUCLEAR ENERGY HOLDINGS, LLC	LLC	100%	N/A	100%	N/A	N/A
SHAW HOME LOUISIANA, LLC	PACIFIC CONTINGENCY SERVICES, LLC	LLC	40%	N/A	100%	N/A	N/A
SHAW HOME LOUISIANA, LLC	PACIFIC SUPPORT GROUP, LLC	LLC	75%	N/A	100%	N/A	N/A
CB&I HOLDCO, LLC	SC WOODS, L.L.C.	LLC	100%	N/A	100%	N/A	N/A
SHAW HOME LOUISIANA, LLC	SHAW CENTCOM SERVICES, LLC	LLC	60%	N/A	100%	N/A	N/A
S C WOODS, L.L.C.	SHAW FAR EAST SERVICES, LLC	LLC	100%	N/A	100%	N/A	N/A
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	SHAW HOME LOUISIANA, LLC	LLC	100%	N/A	100%	N/A	N/A
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	SHAW JV HOLDINGS, LLC	LLC	100%	N/A	100%	N/A	N/A

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CB&I FABRICATION, LLC	SHAW MANAGED SERVICES, LLC	LLC	100%	N/A	100%	N/A	N/A
CB&I GROUP UK HOLDINGS	SHAW POWER ARABIA (A LIMITED LIABILITY COMPANY)	LLC	90%	N/A	100%	N/A	N/A
CB&I POWER LIMITED			10%				
CB&I FABRICATION, LLC	SHAW POWER SERVICES, LLC	LLC	100%	N/A	100%	N/A	N/A
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	SHAW POWER SERVICES GROUP, LLC	LLC	100%	N/A	100%	N/A	N/A
CB&I GROUP INC.	SHAW SERVICES, LLC	LLC	100%	N/A	100%	N/A	N/A
SHAW HOME LOUISIANA, LLC	TIYA GROUP LLC	LLC	49%	N/A	100%	N/A	N/A
CB&I OIL & GAS EUROPE B.V.	WORLD BRIDGE GENERAL CONTRACTING COMPANY LLC	LLC	100% - 10,000,000	10,000,000	100%	N/A	N/A
CBI HOLDCO TWO, INC.	MCDERMOTT TECHNOLOGY, LLC	LLC	100	100	100%	4	N/A

Pledged Partnership Interests:

<u>Grantor</u>	<u>Issuer</u>	<u>Type of Organization</u>	<u>% of Interest Owned</u>	<u>Total Shares Outstanding</u>	<u>% of Interest Pledged</u>	<u>Certificate No.</u>	<u>Par Value</u>
MCDERMOTT MARINE CONSTRUCTION LIMITED	IO OIL & GAS UK LLP	Limited Liability Partnership	50%	N/A	50%	N/A	N/A
MCDERMOTT ASIA PACIFIC PTE. LTD.	J. RAY MCDERMOTT KAZAKHSTAN LIMITED LIABILITY PARTNERSHIP	Limited Liability Partnership	100%	N/A	100%	N/A	N/A
MCDERMOTT ENGINEERING, LLC	MCDERMOTT ENGINEERING L.L.C. AND KHALID SUHAIL AL SHOAIBI FOR ENGINEERING CONSULTANCY	Partnership	75 Units	100	75%	uncertificated	1,000 Saudi Riyals

<u>Grantor</u>	<u>Issuer</u>	<u>Type of Organization</u>	<u>% of Interest Owned</u>	<u>Total Shares Outstanding</u>	<u>% of Interest Pledged</u>	<u>Certificate No.</u>	<u>Par Value</u>
MATRIX ENGINEERING, LTD. MATRIX MANAGEMENT SERVICES, LLC	A&B BUILDERS, LTD.	Partnership	N/A	N/A	99% 1%	N/A	N/A
LUMMUS TECHNOLOGY LLC CHEMICAL RESEARCH & LICENSING LLC	CATALYTIC DISTILLATION TECHNOLOGIES	Partnership	N/A	N/A	50% 50%	N/A	N/A
HOWE-BAKER HOLDINGS, L.L.C. HOWE-BAKER MANAGEMENT, L.L.C.	HOWE-BAKER ENGINEERS, LTD.	Partnership	99% 1.00%	N/A	100%	N/A	N/A
HOWE-BAKER INTERNATIONAL MANAGEMENT, LLC HOWE-BAKER HOLDINGS, LLC	MATRIX ENGINEERING, LTD.	Partnership	0.10% 99.9%	N/A	100%	N/A	N/A
CB&I OIL & GAS EUROPE B.V.	NORTH CASPIAN ENGINEERING LLP	Joint Venture	25%	N/A	100%	N/A	N/A
MCDERMOTT TECHNOLOGY (2), B.V. MCDERMOTT TECHNOLOGY (3), B.V.	NOVOLEN TECHNOLOGY HOLDINGS C.V.	Partnership	N/A N/A	N/A N/A	85.11% 14.89%	N/A N/A	N/A N/A

Pledged Trust Interests: None.

Pledged Notes:

1. Global Intercompany Note dated as of the Effective Date.
2. Promissory Note, dated February 14, 2013, in the aggregate principal amount of \$1,000,000,000 payable by CB&I Group Inc. (f/k/a The Shaw Group Inc.) to Chicago Bridge & Iron Company (Delaware).
3. Promissory Note, dated February 14, 2013, in the aggregate principal amount of \$800,000,000 payable by CB&I Group Inc. (f/k/a The Shaw Group Inc.) to Chicago Bridge & Iron Company (Delaware).

Pledged Commodities Contracts: None.

SCHEDULE 4.9
TO PLEDGE AND SECURITY AGREEMENT

INTELLECTUAL PROPERTY

- (A) **Material Copyright Licenses:** None.
- (B) **Copyrights:** See "Exhibit A" chart attached hereto.
- (C) **Material Patent Licenses:** None.
- (D) **Patents:** See "Exhibit B" chart attached hereto.
- (E) **Material Trademark Licenses:** None.
- (F) **Trademarks:** See "Exhibit C" chart attached hereto.
- (G) **Material Trade Secret Licenses:** None.

COPYRIGHTS

(See Attached.)

EXHIBIT A TO SCHEDULE 4.9

Registration Number	Registration Date	Title	Current Status	Contract Record
Txu0001269599	11/02/05	linest.	Active	J. Ray McDermott
VA0001707212	7/15/2009	CBI Safety Playing Cards.	Active	Chicago Bridge & Iron Company
Txu000279692	04/23/87	SPORTS STANDARD PROCUREMENT ORDERING RECEIVING TRACKING SYSTEM (USER MANUAL)	Active	McDermott International, Inc.
TX0002052757	04/23/87	SPORTS STANDARD PROCUREMENT ORDERING RECEIVING TRACKING SYSTEM (ADVERTISING BROCHURE)	Active	McDermott International, Inc.
Txu000640863	07/03/95	ANCHOR DRAG MONITORING PROGRAM (INSTALLATION & USER MANUAL)	Active	McDermott International, Inc.
Txu000709297	06/20/95	ANCHOR DRAG MONITORING (VER. 3.1)	Active	McDermott International, Inc.
Txu000242242	06/10/86	APPLICATION MANAGEMENT SYSTEM	Active	McDermott International, Inc.
Txu000285153	05/18/87	AUTOMATED CATALOG EDITOR (APPLICATION SOFTWARE)	Active	McDermott International, Inc.
Txu000304463	12/07/87	AUTOMATED CATALOG EDITOR (REVISION 1.0)	Active	McDermott International, Inc.
Txu000355663	03/24/88	AUTOMATIC INTELLIGENT MODELLER	Active	McDermott International, Inc.
Txu000279988	04/18/87	BID EVALUATION- TECHNICAL (BET) PROTOTYPE SYSTEM	Active	McDermott International, Inc.
Txu000388866	05/30/89	CADAD APPLICATION	Active	McDermott International, Inc.
Txu000391056	09/05/89	CADAD APPLICATION IGMW SOURCE LISTING	Active	McDermott International, Inc.
Txu000451863	09/06/89	CADAD APPLICATION IGMW SYSTEM MANUAL AND USER MANUAL	Active	McDermott International, Inc.
Txu000497949	12/02/91	CEDAR	Active	McDermott International, Inc.
TXu000285887	06/25/87	CORPORATE ACCOUNTS PAYABLE SYSTEM (CAPS) DIALOG REPORTS	Active	McDermott International, Inc.
TXU000286204	06/26/87	CORPORATE ACCOUNTS PAYABLE SYSTEM (CAPS) RECORD REPORTS	Active	McDermott International, Inc.
TXu000273401	06/25/87	CORPORATE ACCOUNTS PAYABLE SYSTEM (CAPS) SCHEMA DOCUMENTATION	Active	McDermott International, Inc.
TXu000285567	06/24/87	CORPORATE ACCOUNTS PAYABLE SYSTEM (CAPS) SUBSCHEMA DOCUMENTATION	Active	McDermott International, Inc.
TXU000270321	02/24/87	COST ESTIMATING SYSTEM	Active	McDermott International, Inc.
TX0000865429	03/08/82	DERRICK BARGE 20	Active	McDermott International, Inc.
TX0000865430	03/08/82	DERRICK BARGE 21	Active	McDermott International, Inc.
TX0000865431	03/08/82	DERRICK BARGE 26	Active	McDermott International, Inc.
TX0001648910	08/30/85	DEEPWATER MARINE CONSTRUCTION'S FRONTIER TECHNOLOGY	Active	McDermott International, Inc.
TXu000374299	11/17/88	EBASCO SERVICES CPSES/HVAC PROJECT REPORTING TASK	Active	McDermott International, Inc.

TXu000346706	11/16/88	EBASCO SERVICES CPSES/HVAC, PROJECT ANALYSIS TASK	Active	McDermott International, Inc.
TXu000346557	11/16/88	EBASCO SERVICES CPSES/HVAC, PROJECT MODELING TASK	Active	McDermott International, Inc.
TXu000393793	10/31/89	EBASCO SERVICES, CPSES/HVAC PROJECT, ANALYSIS TASK	Active	McDermott International, Inc.
TXu000374305	05/31/89	EBASCO SERVICES, CPSES/HVAC PROJECT, ANALYSIS TASK	Active	McDermott International, Inc.
TXu000374304	05/31/89	EBASCO SERVICES CPSES/HVAC, PROJECT MODELING TASK	Active	McDermott International, Inc.
TXu000393792	10/31/89	EBASCO SERVICES CPSES/HVAC, PROJECT MODELING TASK	Active	McDermott International, Inc.
TXu000393794	10/31/89	EBASCO SERVICES, CPSES/HVAC PROJECT REPORTING TASK (SUPPLEMENTAL COPYRIGHT REGISTRATION)	Active	McDermott International, Inc.
TXu000374299	05/30/89	EBASCO SERVICES, CPSES/HVAC PROJECT REPORTING TASK (SUPPLEMENTAL COPYRIGHT REGISTRATION)	Active	McDermott International, Inc.
TXu000310768	04/03/87	FACILITIES ANALYSIS SYSTEM/FACILITIES DATA BASE (APPLICATION TEX1	Active	McDermott International, Inc.
TXu000277664	04/13/87	FACILITIES ANALYSIS SYSTEM/FACILITIES DATABASE (APPLICATION SOFTWARE)	Active	McDermott International, Inc.
TXu000241720	06/09/86	HELP DATA BASE	Active	McDermott International, Inc.
TXu000369347	11/18/88	INTERACTIVE GRAPHIC MODELLER	Active	McDermott International, Inc.
TXu000355631	03/24/88	INTERACTIVE GRAPHICS MODELLER WORKSTATION	Active	McDermott International, Inc.
TXu000255506	06/13/86	JOB SUBMISSION SYSTEM	Active	McDermott International, Inc.
TXU000279336	04/29/87	MATERIAL PRICING SYSTEM (ONLINE PROGRAM LISTINGS)	Active	McDermott International, Inc.
TXu000279739	04/29/87	MATERIAL PRICING SYSTEM (USER GUIDE)	Active	McDermott International, Inc.
TX0002524122	03/13/89	MCDERMOTT INFORMATION NETWORK -MCDERMOTT APPLICATION EXCHANGE	Active	McDermott International, Inc.
TXU000321366	03/28/88	MICROSAS	Active	McDermott International, Inc.
TXU000381059	05/09/89	MICROSAS PROGRAMMER'S MANUAL	Active	McDermott International, Inc.
TXu001001220	08/03/01	MICROSAS II	Active	McDermott International, Inc.
TXu000288525	07/10/87	MIMECH/AUTOCAD DRAWING TRANSLATORS	Active	McDermott International, Inc.
TXU000345253	11/16/88	MODEL DEFINITION LANGUAGE/COMPUTER (MDLC)	Active	McDermott International, Inc.
TXU000280635	04/29/87	OLIVES SYSTEM	Active	McDermott International, Inc.
TXu000280616	04/29/87	OLIVES SYSTEM (APPLICATION TEXI)	Active	McDermott International, Inc.
TX0002041533	04/06/87	PLANNING AND SCHEDULING SYSTEMS	Active	McDermott International, Inc.

TXu000270922	02/20/87	QTO DIGITIZER AND DATA ENTRY PROGRAM	Active	McDermott International, Inc.
TXu000241721	06/09/86	QUANTITY TAKEOFF SYSTEM	Active	McDermott International, Inc.
TXu000270879	02/20/87	QUANTITY TAKEOFF SYSTEM	Active	McDermott International, Inc.
TXu000363124	03/10/89	QUANTITY TAKEOFF SYSTEM, BATCH SOFTWARE, VERSION 2.6	Active	McDermott International, Inc.
TXu000363250	03/10/89	QUANTITY TAKEOFF SYSTEM, QA FORMS AND REGISTER, VERSION 2.6	Active	McDermott International, Inc.
TXu000280838	04/29/87	SPORTS (APPLICATION SOFTWARE)	Active	McDermott International, Inc.
TXu000250012	06/09/86	STRUCTURAL ANALYSIS SYSTEM/STRUCTURAL DATA BASE	Active	McDermott International, Inc.
TXu000522949	10/21/91	THE PATENT PROCESS	Active	McDermott International, Inc.
TX0001653013	09/09/85	TO MEET THE NEED FOR ENERGY, McDERMOTT BUILDS BENEATH THE SEA AS FAR AS MAN BUILDS TO THE SKY	Active	McDermott International, Inc.
TXU000518942	05/18/92	CONTINUOUS IMPROVEMENT PROCESS REFERENCE MANUAL	Active	McDermott International, Inc.
TX0000865432	03/08/82	CRANE BARGE NO.14	Active	McDermott, Inc.
TX0000588209	11/26/80	INSERVICE INSPECTION: SERVICE EXPERTISE FOR THE LIFE OF YOUR NUCLEAR UNITS, BROCHURE NO. E 105-3036	Active	McDermott, Inc.
TX0000865434	03/08/82	LAY BARGE4 NO. 25	Active	McDermott, Inc.
TX0000906880	03/08/82	McDERMOTT DIVERS.	Active	McDermott, Inc.
TX0000865433	03/08/82	McDERMOTT SOUTH EAST ASIA	Active	McDermott, Inc.
TXu000603143	11/09/93	STRNPDMS	Active	McDermott, Inc.
TXu000615042	01/14/94	ACCELERATED DECOMPRESSION FOR MANAGEMENT OF EMERGENCY CONTINGENCIES	Active	McDermott, Inc.
TX0000590486	12/1/1980	ALDPIPE	Active	McDermott, Inc.
TX0000821165	1/30/1981	B&W BAG FILTERHOUSE	Active	McDermott, Inc.
TXu000281317	5/15/1987	CONCEPT MODELLER	Active	McDermott, Inc.
TXu000348340	11/17/1988	EBASCO SERVICES CPSES/HVAC PROJECT REPORTING TASK	Active	McDermott International, Inc.
TXu000369543	5/9/1989	MICROSAS: MICROCOMPUTER STRUCTURAL ANALYSIS SYSTEM	Active	McDermott International, Inc.
TX0000582823	11/14/1980	MIRROR ALL-METAL REFLECTIVE INSULATION VALVE AND FLANGE COVERS	Active	McDermott, Inc.
TXu000812355	8/14/1997	REENGINEERING EXECUTIVE PRESENTATION	Active	McDermott International, Inc.
TXu000666137	12/27/1994	REENGINEERING WORKSHOP	Active	McDermott International, Inc.
TXu000827210	8/13/1997	REENGINEERING WORKSHOP: INSTRUCTOR MANUAL	Active	McDermott International, Inc.
TXu000800804	8/14/1997	TOTAL QUALITY MANAGEMENT: REFERENCE MANUAL	Active	McDermott International, Inc.

TXu000275972	3/16/1987	ROBOTIC AUTOMATIC PART PROGRAMMING GENERATOR	Active	McDermott, Inc.
TXu000744991	11/6/1996	Instrument Engineering Design Package	Active	ABB Lummus Global, Inc.
TXu0001225412	11/9/1983	From Lummus/Buckau-Wolf: The Alcohol Production Process Proved Worldwide For Economy, Productivity, Efficiency	Active	The Lummus Company
TXu001978273	9/15/2012	Sulfur Recovery Unit	Active	Chicago Bridge & Iron Company

EXHIBIT B TO SCHEDULE 4.9

PATENTS

(See Attached.)

COUNTRY	STATUS	APPLICATION NUMBER	DATE FILED	PATENT NUMBER	GRANT DATE	TITLE	OWNER OF RECORD
CA	Issued	2,298,390	Feb 14, 2000	2,298,390	May 15, 2004	UNIVERSAL CATENARY RISER SUPPORT	Deep Oil Technology, Inc..
CA	Issued	2,378,517	Jul 5, 2000	2378517	Oct 31, 2006	EXTENDED-BASE TENSION LEG PLATFORM SUBSTRUCTURE	Deep Water Marine Technology, L.L.C.
US	Issued	09/609,885	Jul 5, 2000	6,447,208	Sep 10, 2002	Extended base tension leg substructures and method for supporting offshore platforms	Deep Water Marine Technology, L.L.C.
CA	Issued	2,387,561	Oct 13, 2000	2387561	Dec 16, 2003	CONVERSION OF NITROGEN OXIDES IN THE PRESENCE OF A CATALYST SUPPORTED ON A MESH-LIKE STRUCTURE	ABB LUMMUS GLOBAL, INC.
US	Issued	09/687,976	Oct 13, 2000	6,534,022	Mar 18, 2003	CONVERSION OF NITROGEN OXIDES IN THE PRESENCE OF A CATALYST SUPPORTED ON A MESH-LIKE STRUCTURE	ABB LUMMUS GLOBAL, INC.
US	Issued	10/385,369	Mar 10, 2003	6,946,107	Sep 20, 2005	CONVERSION OF NITROGEN OXIDES IN THE PRESENCE OF A CATALYST SUPPORTED ON A MESH-LIKE STRUCTURE	ABB LUMMUS GLOBAL, INC.
US	Issued	09/866,340	May 25, 2001	6,392,078	May 21, 2002	Process and catalyst for making dialkyl carbonates	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,412,160	Jun 5, 2001	2412160	Jul 29, 2008	METHOD AND APPARATUS FOR COOLING THE INLET AIR OF COMBUSTION TURBINES	Chicago Bridge & Iron Company (DE)
US	Issued	09/591,250	Jun 9, 2000	6,408,609	Jun 25, 2002	Method and apparatus for enhancing power output and efficiency of combustion turbines	Chicago Bridge & Iron Company (DE)
CA	Issued	2,349,516	Jun 4, 2001	2349516	Aug 2, 2005	LIQUID CLARIFICATION TANK	Chicago Bridge & Iron Company (DE)
CA	Issued	2,339,703	Mar 8, 2001	2339703	Jan 8, 2008	ELEVATED STORAGE TANK	Tindall Corporation; Chicago Bridge & Iron Company (DE)
US	Issued	09/520,870	Mar 8, 2000	6,318,034	Nov 20, 2001	ELEVATED STORAGE TANK	Tindall Corporation; Chicago Bridge & Iron Company (DE)
CA	Issued	2,415,453	Jul 31, 2001	2415453	Oct 2, 2007	SECONDARY SEAL FOR FLOATING ROOF STORAGE TANK	Chicago Bridge & Iron Company (DE)
US	Issued	09/630,059	Aug 1, 2000	6,354,488	Mar 12, 2002	SECONDARY SEAL FOR FLOATING ROOF STORAGE TANK	Chicago Bridge & Iron Company (DE)
US	Issued	09/603,160	Jun 23, 2000	6,470,706	Oct 29, 2002	SYSTEM AND APPARATUS FOR CONDENSING BOIL OFF VAPOR FROM A LIQUIFIED NATURAL GAS CONTAINER	Chicago Bridge & Iron Company (DE)

US	Issued	10/102,002	Mar 20, 2002	6,497,150	Dec 24, 2002	ULTRASONIC AUSTENITIC WELD SEAM INSPECTION METHOD AND APPARATUS	Chicago Bridge & Iron Company (DE)
US	Issued	09/531,288	Mar 20, 2000	6,274,783	Aug 14, 2001	CATALYTIC DISTILLATION PROCESS FOR THE PRODUCTION OF C8 ALKANES	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	09/576,364	May 22, 2000	6,402,428	Jun 11, 2002	PIPELINE RECOVERY TOOL	J. Ray McDermott S.A.
US	Issued	09/514,115	Feb 28, 2000	6,349,976	Feb 26, 2002	PIPE IN PIPE ASSEMBLY	Mentor Subsea Technology Services, Inc
US	Issued	09/514,115	Feb 28, 2000	6,349,976	Feb 26, 2002	PIPE IN PIPE ASSEMBLY	Mentor Subsea Technology Services, Inc
US	Issued	10/106,697	Mar 26, 2002	6,547,039	Apr 15, 2003	WIRE ROPE LUBRICATION DEVICE FOR A CRANE	J. Ray McDermott S.A.
US	Issued	10/106,714	Mar 26, 2002	6,550,581	Apr 22, 2003	WIRE ROPE LUBRICATION DEVICE FOR A CRANE	J. Ray McDermott S.A.
US	Issued	09/557,433	Apr 25, 2000	6,446,756	Sep 10, 2002	WIRE ROPE LUBRICATION DEVICE FOR A CRANE	J. Ray McDermott S.A.
US	Issued	09/576,697	May 23, 2000	6,347,909	Feb 19, 2002	METHOD TO TRANSPORT AND INSTALL A DECK	J. Ray McDermott S.A.
CA	Issued	2,407,139	May 11, 2001	2407139	Jan 8, 2008	TEMPORARY FLOATATION STABILIZATION DEVICE AND METHOD	Deep Water Marine Technology, L.L.C.
US	Issued	10/842,827	May 11, 2004	7,033,115	Apr 25, 2006	TEMPORARY FLOATATION STABILIZATION DEVICE AND METHOD	Deep Water Marine Technology, L.L.C.
US	Issued	09/853,255	May 11, 2001	6,503,023	Jan 7, 2003	TEMPORARY FLOATATION STABILIZATION DEVICE AND METHOD	Deep Water Marine Technology, L.L.C.
US	Issued	09/630,656	Aug 1, 2000	6,388,155	May 14, 2002	STYRENE DEHYDROGENATION REACTOR EFFLUENT TREATMENT	ABB LUMMUS GLOBAL INC.
US	Issued	09/678,567	Oct 3, 2000	6,392,113	May 21, 2002	CATALYTIC HYDROCARBON DEHYDROGENATION SYSTEM WITH PREREACTION	ABB LUMMUS GLOBAL INC.
US	Issued	09/557,022	Apr 20, 2000	6,547,956	Apr 15, 2003	Hydrocracking of vacuum gas and other oils using a post-treatment reactive distillation system	ABB LUMMUS GLOBAL INC.
US	Issued	09/557,025	Apr 20, 2000	6,514,403	Feb 4, 2003	HYDROCRACKING OF VACUUM GAS AND OTHER OILS USING A COCURRENT/ COUNTERCURRENT REACTION SYSTEM AND A POST-TREATMENT REACTIVE DISTILLATION SYSTEM	ABB LUMMUS GLOBAL INC.

US	Issued	09/638,375	Aug 15, 2000	6,454,932	Sep 24, 2002	MULTIPLE STAGE EBULLATING BED HYDROCRACKING WITH INTERSTAGE STRIPPING AND SEPARATING	ABB LUMMUS GLOBAL INC.
US	Issued	09/638,374	Aug 15, 2000	6,726,832	Apr 27, 2004	MULTIPLE STAGE CATALYST BED HYDROCRACKING WITH INTERSTAGE FEEDS	ABB LUMMUS GLOBAL INC.
US	Issued	09/534,279	Mar 24, 2000	6,414,205	Jul 2, 2002	PROCESS FOR THE REMOVAL OF MAPD FROM HYDROCARBON STREAMS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	09/827,411	Apr 6, 2001	6,576,588	Jun 10, 2003	PROCESS FOR SELECTIVE HYDROGENATION OF ALKYNES AND CATALYST THEREFOR	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/374,286	Feb 25, 2003	6,717,022	Apr 6, 2004	PROCESS FOR SELECTIVE HYDROGENATION OF ALKYNES AND CATALYST THEREFOR	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	09/502,509	Feb 11, 2000	6,303,020	Oct 16, 2001	PROCESS FOR THE DESULFURIZATION OF PETROLEUM FEEDS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	09/886,542	Jun 21, 2001	6,592,750	Jul 15, 2003	PROCESS FOR THE DESULFURIZATION OF PETROLEUM FEEDS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	09/951,295	Sep 11, 2001	6,518,462	Feb 11, 2003	PROCESS FOR PRODUCTION OF MIBK USING CD TECHNOLOGY	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/289,693	Nov 7, 2002	6,762,328	Jul 13, 2004	PROCESS FOR PRODUCTION OF MIBK USING CD TECHNOLOGY	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/445,528	May 27, 2003	6,734,333	May 11, 2004	RECOVERY OF TERTIARY BUTYL ALCOHOL	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	09/769,871	Jan 25, 2001	6,420,619	Jul 16, 2002	CRACKED GAS PROCESSING AND CONVERSION FOR PROPYLENE PRODUCTION	ROBERT J. GARTSIDE; GARY R. GILDERT
US	Issued	10/055,126	Jan 23, 2002	6,727,396	Apr 27, 2004	PROCESS FOR THE PRODUCTION OF LINEAR ALPHA OLEFINS AND ETHYLENE	ABB LUMMUS GLOBAL INC.
US	Issued	09/841,277	Apr 24, 2001	6,685,893	Feb 3, 2004	PYROLYSIS HEATER	ABB LUMMUS GLOBAL INC.
CA	Issued	2,448,532	May 22, 2002	2448532	Dec 8, 2009	OLEFIN ISOMERIZATION PROCESS	ABB LUMMUS GLOBAL INC.
US	Issued	09/863,973	May 23, 2001	6,875,901	Apr 5, 2005	OLEFIN ISOMERIZATION PROCESS	ABB LUMMUS GLOBAL INC.
US	Issued	09/793,448	Feb 26, 2001	6,821,490	Nov 23, 2004	Parallel flow gas phase reactor and method for reducing the nitrogen oxide content of a gas	ABB LUMMUS GLOBAL INC.

US	Issued	09/793,470	Feb 26, 2001	6,706,246	Mar 16, 2004	SYSTEM AND METHOD FOR THE SELECTIVE CATALYTIC REDUCTION OF NITROGEN OXIDE IN A GAS STREAM	ABB LUMMUS GLOBAL INC.
US	Issued	09/793,471	Feb 26, 2001	6,663,839	Dec 16, 2003	RADIAL FLOW GAS PHASE REACTOR AND METHOD FOR REDUCING THE NITROGEN OXIDE CONTENT OF A GAS	ABB LUMMUS GLOBAL INC.
US	Issued	09/973,401	Oct 9, 2001	7,572,414	Aug 11, 2009	MODULAR SYSTEM AND METHOD FOR THE CATALYTIC TREATMENT OF A GAS STREAM	ABB LUMMUS GLOBAL INC.
CA	Issued	2,439,981	Mar 6, 2002	2439981	Nov 9, 2010	LNG PRODUCTION USING DUAL INDEPENDENT EXPANDER REFRIGERATION CYCLES	LUMMUS TECHNOLOGY INC.
US	Issued	09/828,551	Apr 6, 2001	6,412,302	Jul 2, 2002	LNG PRODUCTION USING DUAL INDEPENDENT EXPANDER REFRIGERATION CYCLES	LUMMUS TECHNOLOGY INC.
CA	Issued	2,440,142	Mar 1, 2002	2440142	Sep 25, 2012	CRYOGENIC PROCESS UTILIZING HIGH PRESSURE ABSORBER COLUMN	LUMMUS TECHNOLOGY INC.
US	Issued	10/003,388	Oct 22, 2001	6,712,880	Mar 30, 2004	CRYOGENIC PROCESS UTILIZING HIGH PRESSURE ABSORBER COLUMN	LUMMUS TECHNOLOGY INC.
US	Issued	09/965,758	Sep 28, 2001	6,495,030	Dec 17, 2002	PROCESS FOR THE DESULFURIZATION OF FCC NAPHTHA	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,493,862	Jun 12, 2003	2493862	Aug 24, 2010	PARAFFIN ALKYLATION	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,688,868	Jun 12, 2003	2688868	Nov 1, 2011	PARAFFIN ALKYLATION	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/219,877	Aug 15, 2002	6,858,770	Feb 22, 2005	PARAFFIN ALKYLATION	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/793,028	Mar 4, 2004	7,250,542	Jul 31, 2007	PARAFFIN ALKYLATION	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/870,104	Jun 17, 2004	6,995,296	Feb 7, 2006	PARAFFIN ALKYLATION	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/973,746	Oct 26, 2004	7,319,180	Jan 15, 2008	PARAFFIN ALKYLATION	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/983,562	Nov 8, 2004	7,175,754	Feb 13, 2007	Process for the production of low benzene gasoline	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,511,776	Dec 15, 2003	2511776	Feb 1, 2011	SPRING LOADED SECONDARY SEAL FOR FLOATING ROOF STORAGE TANK	Chicago Bridge & Iron Company (DE)

CA	Issued	2,573,094	Jul 11, 2005	2573094	Jan 8, 2013	SPRING-LOADED SECONDARY SEAL FOR FLOATING-ROOF STORAGE TANK, LIQUID STORAGE TANK AND METHOD FOR INSTALLING A SECONDARY SEAL IN A LIQUID STORAGE TANK	Chicago Bridge & Iron Company (DE)
US	Issued	10/889,404	Jul 12, 2004	7,748,555	Jul 6, 2010	SPRING LOADED SECONDARY SEAL FOR FLOATING ROOF STORAGE TANK	Chicago Bridge & Iron Company (DE)
US	Issued	10/320,093	Dec 16, 2002	7,044,322	May 16, 2006	SPRING LOADED SECONDARY SEAL FOR FLOATING ROOF STORAGE TANK	Chicago Bridge & Iron Company (DE)
US	Issued	10/212,887	Aug 6, 2002	6,814,874	Nov 9, 2004	CLARICONE SLUDGE LEVEL CONTROL SYSTEM	Chicago Bridge & Iron Company (DE)
US	Issued	10/167,196	Jun 11, 2002	6,930,206	Aug 16, 2005	PROCESS AND APPARATUS FOR CATALYTIC DISTILLATIONS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/839,398	May 5, 2004	7,410,555	Aug 12, 2008	PROCESS AND APPARATUS FOR CATALYTIC DISTILLATIONS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/839,399	May 5, 2004	7,014,833	Mar 21, 2006	PROCESS AND APPARATUS FOR CATALYTIC DISTILLATIONS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/839,401	May 5, 2004	7,030,277	Apr 18, 2006	PROCESS AND APPARATUS FOR CATALYTIC DISTILLATIONS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/839,405	May 5, 2004	7,026,517	Apr 11, 2006	PROCESS AND APPARATUS FOR CATALYTIC DISTILLATIONS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/093,708	Mar 8, 2002	6,620,965	Sep 16, 2003	PROCESS FOR VINYL ACETATE	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,493,811	Jul 24, 2003	2493811	Jul 6, 2010	CONTACT STRUCTURES	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	11/477,003	Jun 28, 2006	7,850,929	Dec 14, 2010	CONTACT STRUCTURES	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,493,793	Aug 11, 2003	2493793	May 10, 2011	PULSE FLOW REACTION	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/223,192	Aug 19, 2002	6,774,275	Aug 10, 2004	PULSE FLOW REACTION	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/827,648	Apr 19, 2004	7,288,693	Oct 30, 2007	PULSE FLOW REACTION	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/120,072	Apr 10, 2002	7,004,085	Feb 28, 2006	CRACKING FURNACE WITH MORE UNIFORM HEATING	ABB LUMMUS GLOBAL INC.
CA	Issued	2,478,632	Apr 9, 2003	2478632	Nov 18, 2008	OLEFIN PLANT REFRIGERATION SYSTEM	ABB LUMMUS GLOBAL INC.
CA	Issued	2,518,755	Jan 15, 2004	2518755	Aug 2, 2011	OLEFIN PLANT REFRIGERATION SYSTEM	ABB LUMMUS GLOBAL INC.
US	Issued	10/121,151	Apr 11, 2002	6,637,237	Oct 28, 2003	OLEFIN PLANT REFRIGERATION SYSTEM	ABB LUMMUS GLOBAL INC.
US	Issued	10/342,998	Jan 15, 2003	6,705,113	Mar 16, 2004	OLEFIN PLANT REFRIGERATION SYSTEM	ABB LUMMUS GLOBAL INC.

CA	Issued	2,496,778	Oct 10, 2003	2496778	Mar 24, 2015	HIGH RECOVERY PSA CYCLES AND APPARATUS WITH REDUCED COMPLEXITY	LUMMUS TECHNOLOGY INC.
CA	Issued	2,790,067	Oct 10, 2003	2790067	Nov 25, 2014	HIGH RECOVERY PSA CYCLES AND APPARATUS WITH REDUCED COMPLEXITY	LUMMUS TECHNOLOGY INC.
CA	Issued	2,835,636	Oct 10, 2003	2835636	May 17, 2016	HIGH RECOVERY PSA CYCLES AND APPARATUS WITH REDUCED COMPLEXITY	LUMMUS TECHNOLOGY INC.
US	Issued	10/269,064	Oct 11, 2002	6,699,307	Mar 2, 2004	HIGH RECOVERY PSA CYCLES AND APPARATUS WITH REDUCED COMPLEXITY	LUMMUS TECHNOLOGY INC.
US	Issued	10/720,517	Nov 25, 2003	6,858,065	Feb 22, 2005	HIGH RECOVERY PSA CYCLES AND APPARATUS WITH REDUCED COMPLEXITY	LUMMUS TECHNOLOGY INC.
US	Issued	09/576,365	May 22, 2000	6,364,577	Apr 2, 2002	PILE DRIVING TRANSITION PIECE	J. Ray McDermott S.A.
US	Issued	10/263,882	Oct 3, 2002	7,044,522	May 16, 2006	PASSIVE CAPTURE SLIP-PROOF CHAIN HANDLING HOOK	J. Ray McDermott S.A.
CA	Issued	2,518,307	Nov 14, 2003	2518307	Mar 20, 2012	EXTRACTION OF PHENOL FROM WASTEWATER	LUMMUS TECHNOLOGY INC.
US	Issued	10/300,356	Nov 20, 2002	6,824,687	Nov 30, 2004	EXTRACTION OF PHENOL FROM WASTEWATER	LUMMUS TECHNOLOGY INC.
US	Issued	10/419,579	Apr 21, 2003	6,931,889	Aug 23, 2005	CRYOGENIC PROCESS FOR INCREASED RECOVERY OF HYDROGEN	ABB LUMMUS GLOBAL, RANDALL GAS TECHNOLOGIES
US	Issued	10/455,467	Jun 5, 2003	6,889,522	May 10, 2005	LNG floating production, storage, and offloading scheme	ABB LUMMUS GLOBAL, RANDALL GAS TECHNOLOGIES
CA	Issued	2,615,987	Jul 25, 2006	2615987	Mar 20, 2012	LIQUID NATURAL GAS PROCESSING	HOWE-BAKER ENGINEERS, LTD.
US	Issued	10/115,150	Apr 3, 2002	6,941,771	Sep 13, 2005	LIQUID NATURAL GAS PROCESSING	HOWE-BAKER ENGINEERS, LTD.
US	Issued	10/237,847	Sep 9, 2002	6,604,380	Aug 12, 2003	LIQUID NATURAL GAS PROCESSING	HOWE-BAKER ENGINEERS, LTD.
US	Pending	12/315,896	Dec 8, 2008			LIQUID NATURAL GAS PROCESSING	HOWE-BAKER ENGINEERS, LTD.
CA	Issued	2,506,974	Nov 18, 2003	2506974	Jan 25, 2011	APPARATUS FOR COUNTERCURRENT CONTACTING OF GAS AND SOLIDS	LUMMUS TECHNOLOGY INC.
US	Issued	10/303,452	Nov 25, 2002	7,179,427	Feb 20, 2007	APPARATUS FOR COUNTERCURRENT CONTACTING OF GAS AND SOLIDS	LUMMUS TECHNOLOGY INC.
US	Issued	10/055,196	Jan 23, 2002	6,849,773	Feb 1, 2005	PROCESS FOR THE UTILIZATION OF REFINERY C4 STREAMS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/912,253	Aug 5, 2004	6,919,016	Jul 19, 2005	PROCESS FOR THE UTILIZATION OF REFINERY C4 STREAMS	CATALYTIC DISTILLATION TECHNOLOGIES

US	Issued	10/290,831	Nov 8, 2002	6,734,328	May 11, 2004	PROCESS FOR THE SELECTIVE HYDROGENATION OF ALKYNES	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/679,909	Oct 6, 2003	7,041,860	May 9, 2006	PROCESS FOR THE SELECTIVE HYDROGENATION OF ALKYNES	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/525,148	Sep 27, 2005	7,553,997	Jun 30, 2009	HYDROGENATION OF OLEFINIC FEEDSTOCKS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/093,880	Mar 8, 2002	6,824,676	Nov 30, 2004	PROCESS FOR THE SELECTIVE DESULFURIZATION OF A MID RANGE GASOLINE CUT	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/820,399	Apr 7, 2004	7,351,327	Apr 1, 2008	PROCESS FOR THE SELECTIVE DESULFURIZATION OF A MID RANGE GASOLINE CUT	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/285,852	Nov 1, 2002	7,153,415	Dec 26, 2006	PROCESS FOR THE TREATMENT OF LIGHT NAPHTHA HYDROCARBON STREAMS	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,484,411	Oct 8, 2004	2484411	Mar 27, 2012	ANAEROBIC SLUDGE DIGESTER	Chicago Bridge & Iron Company (IL)
US	Issued	10/682,050	Oct 9, 2003	7,172,698	Feb 6, 2007	ANAEROBIC SLUDGE DIGESTER	Chicago Bridge & Iron Company (IL)
US	Issued	10/339,098	Jan 9, 2003	7,162,844	Jan 16, 2007	Use of partial precast panels for construction of concrete walls and shells	Chicago Bridge & Iron Company (IL)
US	Issued	11/207,147	Aug 19, 2005	7,255,777	Aug 14, 2007	DISTILLATION SYSTEM	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	11/034,463	Jan 13, 2005	7,091,252	Aug 15, 2006	LIQUID-CONTINUOUS COLUMN DISTILLATION	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	11/455,341	Jun 19, 2006	7,287,745	Oct 30, 2007	LIQUID-CONTINUOUS COLUMN DISTILLATION	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/620,186	Jul 15, 2003	7,214,841	May 8, 2007	PROCESSING C4 OLEFIN STREAMS FOR THE MAXIMUM PRODUCTION OF PROPYLENE	ABB LUMMUS GLOBAL INC.
CA	Issued	2,546,021	Nov 15, 2004	2546021	Jul 21, 2009	PRODUCTION OF PROPYLENE FROM STEAM CRACKING OF HYDROCARBONS, PARTICULARLY ETHANE	ABB LUMMUS GLOBAL INC.
US	Issued	10/716,232	Nov 18, 2003	7,223,895	May 29, 2007	PRODUCTION OF PROPYLENE FROM STEAM CRACKING OF HYDROCARBONS, PARTICULARLY ETHANE	ABB LUMMUS GLOBAL INC.
US	Issued	11/703,498	Feb 7, 2007	7,525,007	Apr 28, 2009	PRODUCTION OF PROPYLENE FROM STEAM CRACKING OF HYDROCARBONS, PARTICULARLY ETHANE	ABB LUMMUS GLOBAL INC.
US	Issued	10/717,087	Nov 19, 2003	7,172,412	Feb 6, 2007	PYROLYSIS HEATER	ABB LUMMUS GLOBAL INC.
CA	Issued	2,535,395	Aug 17, 2004	2535395	Mar 20, 2012	HEAT EXCHANGER	ABB LUMMUS GLOBAL INC.
US	Issued	10/644,157	Aug 20, 2003	6,827,138	Dec 7, 2004	HEAT EXCHANGER	ABB LUMMUS GLOBAL INC.

US	Issued	10/441,562	May 20, 2003	6,817,808	Nov 16, 2004	Rotatable Pipeline End Termination	Mentor Subsea Technology Services, Inc
US	Issued	10/600,131	Jun 19, 2003	6,886,637	May 3, 2005	Cylinder-Stem Assembly To Floating Platform, Gap Controlling Interface Guide	Mentor Subsea Technology Services, Inc
US	Issued	10/618,845	Jul 14, 2003	6,932,542	Aug 23, 2005	Tension Leg Platform Having A Lateral Mooring System and Methods for Using and Installing Same	Deep Water Marine Technology, L.L.C.
US	Issued	10/372,449	Feb 25, 2003	7,074,978	Jul 11, 2006	PROCESS FOR THE PRODUCTION OF ALKYL BENZENE	ABB LUMMUS GLOBAL INC.
US	Issued	11/449,548	Jun 8, 2006	7,524,467	Apr 28, 2009	PROCESS FOR THE PRODUCTION OF ALKYL BENZENE	ABB LUMMUS GLOBAL INC.
US	Issued	10/376,683	Feb 28, 2003	7,238,843	Jul 3, 2007	PROCESS FOR THE PRODUCTION OF ALKYL AROMATICS	ABB LUMMUS GLOBAL INC.
US	Issued	10/457,863	Jun 10, 2003	7,071,369	Jul 4, 2006	PROCESS FOR THE PRODUCTION OF ALKYL BENZENE WITH ETHANE STRIPPING	ABB LUMMUS GLOBAL INC.
US	Issued	10/660,065	Sep 8, 2003	7,259,282	Aug 21, 2007	PROCESS FOR PRODUCTION OF ETHYL BENZENE FROM DILUTE ETHYLENE STREAMS	ABB LUMMUS GLOBAL INC.
US	Issued	11/825,422	Jul 6, 2007	7,393,988	Jul 1, 2008	PROCESS FOR PRODUCTION OF ETHYL BENZENE FROM DILUTE ETHYLENE STREAMS	ABB LUMMUS GLOBAL INC.
US	Issued	10/364,073	Feb 11, 2003	6,823,692	Nov 30, 2004	CARBON DIOXIDE REDUCTION SCHEME FOR NGL PROCESSES	ABB LUMMUS GLOBAL INC.
US	Issued	10/651,178	Aug 28, 2003	6,964,181	Nov 15, 2005	OPTIMIZED HEATING VALUE IN NATURAL GAS LIQUIDS RECOVERY SCHEME	ABB LUMMUS GLOBAL INC.
CA	Issued	2,510,022	Dec 19, 2003	2510022	Feb 14, 2012	LEAN REFLUX-HIGH HYDROCARBON RECOVERY PROCESS	LUMMUS TECHNOLOGY INC.
US	Issued	10/739,885	Dec 18, 2003	7,069,744	Jul 4, 2006	LEAN REFLUX-HIGH HYDROCARBON RECOVERY PROCESS	LUMMUS TECHNOLOGY INC.
CA	Issued	2,531,499	Feb 12, 2004	2531499	Dec 23, 2008	CRYOGENIC LIQUID NATURAL GAS RECOVERY PROCESS	HOWE-BAKER ENGINEERS, LTD.
US	Issued	10/614,458	Jul 7, 2003	6,907,752	Jun 21, 2005	Cryogenic liquid natural gas recovery process	HOWE-BAKER ENGINEERS, LTD.
CA	Issued	2,526,659	May 28, 2004	2526659	Jul 16, 2013	HYDROGENATION OF MIDDLE DISTILLATE USING A COUNTER-CURRENT REACTOR	LUMMUS TECHNOLOGY INC.
US	Issued	10/449,046	May 30, 2003	7,247,235	Jul 24, 2007	HYDROGENATION OF MIDDLE DISTILLATE USING A COUNTER-CURRENT REACTOR	LUMMUS TECHNOLOGY INC.
US	Issued	10/385,677	Mar 12, 2003	6,867,338	Mar 15, 2005	SELECTIVE HYDROGENATION OF ACETYLENES AND DIENES IN A HYDROCARBON STREAM	CATALYTIC DISTILLATION TECHNOLOGIES

US	Issued	10/983,433	Nov 8, 2004	7,368,617	May 6, 2008	SELECTIVE HYDROGENATION OF ACETYLENES AND DIENES IN A HYDROCARBON STREAM	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	11/010,907	Dec 13, 2004	7,319,176	Jan 15, 2008	SELECTIVE HYDROGENATION OF ACETYLENES	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/633,867	Aug 4, 2003	7,022,645	Apr 4, 2006	NI HYDROGENATION CATALYSTS, MANUFACTURE AND USE	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	11/249,867	Oct 13, 2005	7,196,035	Mar 27, 2007	NI HYDROGENATION CATALYSTS, MANUFACTURE AND USE	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/635,763	Aug 5, 2003	7,045,669	May 16, 2006	DUAL PRESSURE CATALYTIC DISTILLATION HYDROGENATION COLUMN SYSTEM FOR THE FRONT END OF AN ETHYLENE PLANT	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/699,712	Nov 3, 2003	6,984,312	Jan 10, 2006	PROCESS FOR THE DESULFURIZATION OF LIGHT FCC NAPHTHA	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/821,225	Apr 8, 2004	7,074,951	Jul 11, 2006	PROCESS FOR MAKING DIALKYL CARBONATES	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	11/358,569	Feb 21, 2006	7,279,592	Oct 9, 2007	PROCESS FOR MAKING DIALKYL CARBONATES	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	11/358,671	Feb 21, 2006	7,314,947	Jan 1, 2008	PROCESS FOR MAKING DIALKYL CARBONATES	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/947,684	Sep 23, 2004	6,939,994	Sep 6, 2005	PROCESS FOR THE PRODUCTION OF BISPHENOL-A	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/899,644	Jul 27, 2004	7,301,062	Nov 27, 2007	PROCESS FOR THE SELECTIVE HYDROGENATION OF ALKYNES AND/OR DIENES IN AN OLEFIN-CONTAINING HYDROCARBON STREAM	ABB LUMMUS GLOBAL INC.
CA	Issued	2,731,560	Aug 6, 2008	2731560	Dec 23, 2014	METHOD OF COOLING USING EXTENDED BINARY REFRIGERATION SYSTEM	LUMMUS TECHNOLOGY INC.
US	Issued	15/173,060	Jun 3, 2016	9,909,804	Mar 6, 2018	METHOD OF COOLING USING EXTENDED BINARY REFRIGERATION SYSTEM	LUMMUS TECHNOLOGY INC.
US	Issued	10/953,992	Sep 29, 2004	7,044,072	May 16, 2006	Cylindrical Hull Structure	SparTEC, Inc.
US	Issued	11/104,825	Apr 13, 2005	7,140,807	Nov 28, 2006	HYBRID COMPOSITE STEEL TENDON FOR OFFSHORE PLATFORM	Deep Water Marine Technology, L.L.C.

US	Issued	10/828,814	Apr 21, 2004	7,285,608	Oct 23, 2007	METALLOCENE LIGANDS, METALLOCENE COMPOUNDS AND METALLOCENE CATALYSTS, THEIR SYNTHESIS AND THEIR USE FOR THE POLYMERIZATION OF OLEFINS	NOVOLEN TECHNOLOGY HOLDINGS C.V.
US	Issued	10/925,596	Aug 25, 2004	7,071,137	Jul 4, 2006	METHOD OF MAKING A ZIEGLER-NATTA CATALYST	NOVOLEN TECHNOLOGY HOLDINGS C.V.
US	Issued	10/935,211	Sep 7, 2004	7,329,626	Feb 12, 2008	ZIEGLER-NATTA CATALYST, PREPARATION AND USE FOR THE POLYMERIZATION OF ALKENES	NOVOLEN TECHNOLOGY HOLDINGS C.V.
US	Issued	11/001,272	Dec 1, 2004	7,169,864	Jan 30, 2007	METALLOCENE CATALYSTS, THEIR SYNTHESIS AND THEIR USE FOR THE POLYMERIZATION OF OLEFINS	NOVOLEN TECHNOLOGY HOLDINGS C.V.
CA	Issued	2,513,677	Jan 16, 2004	2513677	Mar 15, 2011	MULTIPLE REFLUX STREAM HYDROCARBON RECOVERY PROCESS	ABB LUMMUS GLOBAL INC.
US	Issued	10/756,196	Jan 13, 2004	7,484,385	Feb 3, 2009	MULTIPLE REFLUX STREAM HYDROCARBON RECOVERY PROCESS	ABB LUMMUS GLOBAL INC.
US	Issued	12/345,829	Dec 30, 2008	7,856,847	Dec 28, 2010	MULTIPLE REFLUX STREAM HYDROCARBON RECOVERY PROCESS	ABB LUMMUS GLOBAL INC.
US	Issued	12/346,018	Dec 30, 2008	7,793,517	Sep 14, 2010	MULTIPLE REFLUX STREAM HYDROCARBON RECOVERY PROCESS	ABB LUMMUS GLOBAL INC.
US	Issued	12/346,130	Dec 30, 2008	7,818,979	Oct 26, 2010	MULTIPLE REFLUX STREAM HYDROCARBON RECOVERY PROCESS	ABB LUMMUS GLOBAL INC.
CA	Issued	2,518,259	Mar 3, 2004	2518259	May 15, 2012	RESIDUE RECYCLE-HIGH ETHANE RECOVERY PROCESS	ABB LUMMUS GLOBAL INC.
US	Issued	10/791,089	Mar 2, 2004	7,107,788	Sep 19, 2006	RESIDUE RECYCLE-HIGH ETHANE RECOVERY PROCESS	LUMMUS TECHNOLOGY INC.
CA	Issued	2,560,554	Mar 18, 2005	2560554	May 22, 2012	HYDROCARBON RECOVERY PROCESS UTILIZING ENHANCED REFLUX STREAMS	ABB LUMMUS GLOBAL INC.
US	Issued	10/803,490	Mar 18, 2004	7,159,417	Jan 9, 2007	HYDROCARBON RECOVERY PROCESS UTILIZING ENHANCED REFLUX STREAMS	LUMMUS TECHNOLOGY INC.
CA	Issued	2,553,783	Jan 19, 2005	2553783	Mar 26, 2013	SYSTEM AND METHOD FOR SELECTIVE COMPONENT CRACKING TO MAXIMIZE PRODUCTION OF LIGHT OLEFINS	ABB LUMMUS GLOBAL INC.

CA	Issued	2,587,794	Dec 22, 2005	2587794	Jun 17, 2014	PROCESSING OF DIFFERENT FEEDS IN A FLUID CATALYTIC CRACKING UNIT	ABB LUMMUS GLOBAL, INC.
US	Issued	11/021,274	Dec 23, 2004	7,682,501	Mar 23, 2010	PROCESSING OF DIFFERENT FEEDS IN A FLUID CATALYTIC CRACKING UNIT	ABB LUMMUS GLOBAL, INC.
US	Issued	12/719,325	Mar 8, 2010	8,986,617	Mar 24, 2015	PROCESSING OF DIFFERENT FEEDS IN A FLUID CATALYTIC CRACKING UNIT	ABB LUMMUS GLOBAL, INC.
US	Issued	10/828,823	Apr 21, 2004	7,408,089	Aug 5, 2008	NI CATALYST PROCESS FOR MAKING CATALYSTS AND SELECTIVE HYDROGENATION PROCESS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	11/950,920	Dec 5, 2007	7,737,079	Jun 15, 2010	NI CATALYST PROCESS FOR MAKING CATALYSTS AND SELECTIVE HYDROGENATION PROCESS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	11/950,936	Dec 5, 2007	7,737,075	Jun 15, 2010	NI CATALYST PROCESS FOR MAKING CATALYSTS AND SELECTIVE HYDROGENATION PROCESS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/539,229	Aug 11, 2009	7,838,710	Nov 23, 2010	SELECTIVE HYDROGENATION PROCESS AND CATALYST	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	10/926,207	Aug 25, 2004	7,208,646	Apr 24, 2007	SELECTIVE HYDROGENATION OF BUTADIENE	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	11/082,263	Mar 17, 2005	7,488,861	Feb 10, 2009	PROCESS FOR THE CO-PRODUCTION OF CUMENE AND SECONDARY BUTYL BENZENE	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,593,599	Sep 21, 2005	2593599	Jan 4, 2011	METHOD OF REMOVING ORGANIC SULFUR COMPOUNDS FROM ALKYLATE	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	11/034,460	Jan 13, 2005	7,119,244	Oct 10, 2006	METHOD OF REMOVING ORGANIC SULFUR COMPOUNDS FROM ALKYLATE	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	11/256,394	Oct 21, 2005	7,378,540	May 27, 2008	Process for producing organic carbonates	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	11/957,256	Dec 14, 2007	7,696,119	Apr 13, 2010	Process for producing organic carbonates	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,553,051	Jul 24, 2006	2553051	Apr 1, 2014	OIL DISTILLATION VACUUM COLUMN WITH THICKENED PLATE IN THE VAPOR HORN SECTION	Chicago Bridge & Iron Company (IL)
US	Issued	11/190,636	Jul 27, 2005	7,588,664	Sep 15, 2009	OIL DISTILLATION VACUUM COLUMN WITH THICKENED PLATE IN THE VAPOR HORN SECTION	Chicago Bridge & Iron Company (IL)
US	Issued	11/038,755	Jan 19, 2005	7,320,745	Jan 22, 2008	Energy efficient method for exothermic reactions	CATALYTIC DISTILLATION TECHNOLOGIES

US	Issued	11/845,642	Aug 27, 2007	7,494,584	Feb 24, 2009	Energy efficient method for exothermic reactions	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,603,484	Apr 14, 2006	2603484	Feb 11, 2014	PROCESS FOR THE DOUBLE BOND HYDROISOMERIZATION OF BUTENES	ABB LUMMUS GLOBAL INC.
US	Issued	11/107,649	Apr 15, 2005	7,576,251	Aug 18, 2009	PROCESS FOR THE DOUBLE BOND HYDROISOMERIZATION OF BUTENES	ABB LUMMUS GLOBAL INC.
US	Issued	12/460,253	Jul 16, 2009	8,025,857	Sep 27, 2011	APPARATUS FOR THE DOUBLE BOND HYDROISOMERIZATION OF BUTENES	LUMMUS TECHNOLOGY INC.
US	Issued	11/107,059	Apr 15, 2005	7,888,541	Feb 15, 2011	DOUBLE BOND HYDROISOMERIZATION OF BUTENES	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,534,491	Jan 31, 2006	2534491	Apr 1, 2008	CYLINDRICAL HULL STRUCTURAL ARRANGEMENT	SparTEC, Inc.
US	Issued	11/214,069	Aug 29, 2005	7,188,574	Mar 13, 2007	CYLINDRICAL HULL STRUCTURAL ARRANGEMENT	SparTEC, Inc.
US	Issued	11/214,086	29-Aug-05	7,217,067		RISER KEEL JOINT ASSEMBLY	SparTEC, Inc.
CA	Issued	2,562,828	Apr 14, 2005	2562828	Jul 29, 2014	HYDROCARBON GAS PROCESSING FOR RICH GAS STREAMS	ABB LUMMUS GLOBAL INC.
US	Issued	11/102,947	Apr 11, 2005	7,316,127	Jan 8, 2008	HYDROCARBON GAS PROCESSING FOR RICH GAS STREAMS	LUMMUS TECHNOLOGY INC.
US	Issued	11/101,098	Apr 7, 2005	7,408,090	Aug 5, 2008	METHOD OF OPERATING DOWNFLOW BOILING POINT REACTORS IN THE SELECTIVE HYDROGENATION OF ACETYLENES AND DIENES	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/859,975	Aug 20, 2010	8,227,650	Jul 24, 2012	PROCESS AND CATALYST FOR SELECTIVE HYDROGENATION OF DIENES AND ACETYLENES	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	11/057,559	Feb 14, 2005	7,638,041	Dec 29, 2009	PROCESS FOR TREATING CRACKED NAPHTHA STREAMS	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,648,783	Mar 20, 2007	2648783	Oct 9, 2012	PARAFFIN ALKYLATION PROCESS	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,784,166	Mar 20, 2007	2784166	Oct 29, 2013	PARAFFIN ALKYLATION PROCESS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	11/402,079	Apr 11, 2006	7,449,612	Nov 11, 2008	PARAFFIN ALKYLATION PROCESS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/251,623	Oct 15, 2008	7,723,555	May 25, 2010	PARAFFIN ALKYLATION PROCESS	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,659,426	Aug 15, 2007	2659426	Sep 25, 2012	PARAFFIN ALKYLATION	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	11/505,029	Aug 16, 2006	7,601,879	Oct 13, 2009	PARAFFIN ALKYLATION	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,650,296	May 10, 2007	2650296	Aug 19, 2014	STORAGE TANK WITH SELF-DRAINING FULL-CONTACT FLOATING ROOF	Chicago Bridge & Iron Company (IL)
US	Issued	11/439,471	May 23, 2006	8,061,552	Nov 22, 2011	Storage tank with self-draining full-contact floating roof	Chicago Bridge & Iron Company (IL)

CA	Issued	2,581,842	Mar 15, 2007	2581842	Dec 9, 2014	STRUCTURE FOR EXTREME THERMAL CYCLING	Chicago Bridge & Iron Company (IL)
US	Issued	11/376,802	Mar 16, 2006	7,666,279	Feb 23, 2010	STRUCTURE FOR EXTREME THERMAL CYCLING	Chicago Bridge & Iron Company (IL)
US	Issued	11/502,947	Aug 11, 2006	7,493,778	Feb 24, 2009	BOIL OFF GAS CONDENSING ASSEMBLY FOR USE WITH LIQUID STORAGE TANKS	Chicago Bridge & Iron Company (IL)
CA	Issued	2,662,326	Sep 5, 2007	2662326	Nov 29, 2011	PROPYLENE OLIGOMERIZATION PROCESS	CATALYTIC DISTILLATION TECHNOLOGIES; EXXONMOBIL CHEMICAL PATENTS INC.
US	Issued	11/518,372	Sep 8, 2006	7,615,673	Nov 10, 2009	PROPYLENE OLIGOMERIZATION PROCESS	CATALYTIC DISTILLATION TECHNOLOGIES; EXXONMOBIL CHEMICAL PATENTS INC.
CA	Issued	2,687,318	May 15, 2008	2687318	Oct 9, 2012	HEATER AND METHOD OF OPERATION	LUMMUS TECHNOLOGY INC.
US	Issued	11/804,362	May 18, 2007	7,819,656	Oct 26, 2010	HEATER AND METHOD OF OPERATION	LUMMUS TECHNOLOGY INC.
CA	Issued	2,694,290	Jul 24, 2008	2694290	May 6, 2014	METHOD, SYSTEM AND APPARATUS FOR FIRING CONTROL	LUMMUS TECHNOLOGY INC.
US	Issued	11/881,099	Jul 25, 2007	8,408,896	Apr 2, 2013	METHOD, SYSTEM AND APPARATUS FOR FIRING CONTROL	LUMMUS TECHNOLOGY INC.
US	Issued	13/849,935	Mar 25, 2013	9,574,769	Feb 21, 2017	METHOD, SYSTEM AND APPARATUS FOR FIRING CONTROL	LUMMUS TECHNOLOGY INC.
US	Issued	11/682,699	Mar 6, 2007	7,674,319	Mar 9, 2010	PSA pressure measurement and control system	LUMMUS TECHNOLOGY INC.
US	Issued	11/407,058	Apr 20, 2006	7,727,305	Jun 1, 2010	Method and system for atmosphere recycling	LUMMUS TECHNOLOGY INC.
US	Issued	12/939,840	Nov 4, 2010	8,012,423	Sep 6, 2011	Method and apparatus for protective atmosphere recycling	LUMMUS TECHNOLOGY INC.
US	Issued	11/489,017	Jul 19, 2006	7,632,974	Dec 15, 2009	ALKYLATION PROCESS FOR INCREASED CONVERSION AND REDUCED CATALYST USE	LUMMUS TECHNOLOGY INC.
US	Issued	12/635,899	Dec 11, 2009	8,110,161	Feb 7, 2012	ALKYLATION PROCESS FOR INCREASED CONVERSION AND REDUCED CATALYST USE	LUMMUS TECHNOLOGY INC.
US	Issued	11/441,575	May 26, 2006	7,604,681	Oct 20, 2009	THREE STAGE MEMBRANE GAS SEPARATION PROCESS	LUMMUS TECHNOLOGY INC.; MEMBRANE TECHNOLOGY AND RESEARCH, INC.
US	Issued	11/329,492	Jan 10, 2006	7,708,790	May 4, 2010	APPARATUS AND METHOD FOR SEPARATING SOLIDS FROM GAS STREAMS	LUMMUS TECHNOLOGY INC.
US	Issued	12/768,167	Apr 27, 2010	7,985,282	Jul 26, 2011	APPARATUS AND METHOD FOR SEPARATING SOLIDS FROM GAS STREAMS	LUMMUS TECHNOLOGY INC.
CA	Issued	2,666,718	Oct 4, 2007	2666718	Jun 26, 2012	BIMETALLIC ALKYLATION CATALYSTS	LUMMUS TECHNOLOGY INC.

US	Issued	11/906,945	Oct 4, 2007	8,105,968	Jan 31, 2012	BIMETALLIC ALKYLATION CATALYSTS	LUMMUS TECHNOLOGY INC.
US	Issued	11/494,033	Jul 27, 2006	7,875,754	Jan 25, 2011	METHOD OF IMPROVING ALKYLATE YIELD IN AN ALKYLATION REACTION	LUMMUS TECHNOLOGY INC.
US	Issued	11/780,250	Jul 19, 2007	7,476,637	Jan 13, 2009	COATED CATALYST FOR AROMATIC ALKYLATION	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/178,277	Jul 23, 2008	7,547,810	Jun 16, 2009	COATED CATALYST FOR AROMATIC ALKYLATION	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	11/650,874	Jan 8, 2007	7,781,634	Aug 24, 2010	TREATMENT OF OLEFIN FEED TO PARAFFIN ALKYLATION	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,689,593	May 29, 2008	2,689,593	Mar 20, 2012	STORAGE TANK FOR CRYOGENIC LIQUIDS	Chicago Bridge & Iron Company (IL)
US	Issued	14/100,577	Dec 9, 2013	9,726,326	Aug 8, 2017	METHOD OF CONSTRUCTING A STORAGE TANK FOR CRYOGENIC LIQUIDS	Chicago Bridge & Iron Company (IL)
US	Issued	11/758,398	Jun 5, 2007	8,603,375	Dec 10, 2013	STORAGE TANK FOR CRYOGENIC LIQUIDS	Chicago Bridge & Iron Company (IL)
US	Issued	12/788,072	May 26, 2010	8,157,432	Apr 17, 2012	Method of mixing a fluid in a tank with a draft tube mixing system	Chicago Bridge & Iron Company (IL)
US	Issued	11/711,401	Feb 27, 2007	7,748,891	Jul 6, 2010	RESERVOIR MIXING SYSTEM	Chicago Bridge & Iron Company (IL)
US	Issued	11/834,751	Aug 7, 2007	8,211,191	Jul 3, 2012	UPRIGHT GASIFIER	LUMMUS TECHNOLOGY INC.
US	Issued	13/485,583	May 31, 2012	8,444,724	May 21, 2013	UPRIGHT GASIFIER	LUMMUS TECHNOLOGY INC.
US	Issued	11/846,238	Aug 28, 2007	7,993,131	Aug 9, 2011	BURNER NOZZLE	LUMMUS TECHNOLOGY INC.
US	Issued	13/168,732	Jun 24, 2011	8,083,519	Dec 27, 2011	BURNER NOZZLE	LUMMUS TECHNOLOGY INC.
US	Issued	12/116,689	May 7, 2008	8,152,993	Apr 10, 2012	ETHYLENE FURNACE RADIANT COIL DECOKING METHOD	LUMMUS TECHNOLOGY INC.
US	Issued	12/681,336	Oct 1, 2007	8,338,656	Dec 25, 2012	SEPARATING OLEFIN STREAMS	LUMMUS TECHNOLOGY INC.; EXXONMOBILE CHEMICAL PATENTS INC.
CA	Issued	2,718,763	Apr 2, 2009	2,718,763	Mar 27, 2012	BATCH PROCESS AND SYSTEM FOR THE PRODUCTION OF OLEFINS	LUMMUS TECHNOLOGY INC.
US	Issued	12/936,284	Apr 2, 2009	8,742,186	Jun 3, 2014	Batch process and system for the production of olefins	LUMMUS TECHNOLOGY INC.
US	Issued	14/293,281	Jun 2, 2014	9,079,810	Jul 14, 2015	Batch process and system for the production of olefins	LUMMUS TECHNOLOGY INC.
CA	Issued	2,769,265	Jul 29, 2010	2,769,265	Dec 12, 2017	PROCESS AND SYSTEM FOR THE PRODUCTION OF ISOPRENE	LUMMUS TECHNOLOGY INC.
US	Issued	12/462,688	Aug 7, 2009	8,178,736	May 15, 2012	Process and system for the production of Isoprene	LUMMUS TECHNOLOGY INC.
US	Issued	13/466,704	May 8, 2012	8,314,278	Nov 20, 2012	Process and system for the production of Isoprene	LUMMUS TECHNOLOGY INC.

CA	Issued	2,744,085	Mar 23, 2010	2744085	Aug 27, 2013	PRODUCTION OF PROPYLENE FROM BUTANE	LUMMUS TECHNOLOGY INC.
US	Issued	12/410,851	Mar 25, 2009	8,258,357	Sep 4, 2012	PRODUCTION OF PROPYLENE FROM BUTANE	LUMMUS TECHNOLOGY INC.
US	Issued	12/315,296	Dec 2, 2008	8,163,170	Apr 24, 2012	COIL FOR PYROLYSIS HEATER AND METHOD OF CRACKING	LUMMUS TECHNOLOGY INC.
US	Issued	12/207,390	Sep 9, 2008	8,197,674	Jun 12, 2012	THIOETHERIFICATION PROCESSES FOR THE REMOVAL OF MERCAPTANS FROM GAS STREAMS	LUMMUS TECHNOLOGY INC.
US	Issued	12/359,931	Jan 26, 2009	8,815,080	Aug 26, 2014	ADIABATIC REACTOR TO PRODUCE OLEFINS	LUMMUS TECHNOLOGY INC.
CA	Issued	2,733,890	Aug 11, 2009	2733890	Oct 1, 2013	INTEGRATED PROPYLENE PRODUCTION	LUMMUS TECHNOLOGY INC.
US	Issued	12/540,109	Aug 12, 2009	8,153,851	Apr 10, 2012	INTEGRATED PROPYLENE PRODUCTION	LUMMUS TECHNOLOGY INC.
US	Issued	13/343,076	Jan 4, 2012	8,258,358	Sep 4, 2012	INTEGRATED PROPYLENE PRODUCTION	LUMMUS TECHNOLOGY INC.
US	Issued	11/853,351	Sep 11, 2007	7,553,995	Jun 30, 2009	METHOD OF PRODUCING TERTIARY AMYL ETHYL ETHER	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	11/857,160	Sep 18, 2007	7,825,282	Nov 2, 2010	PROCESS FOR THE CONVERSION OF TERTIARY BUTYL ALCOHOL TO ETHYL TERTIARY BUTYL ETHER	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	11/852,923	Sep 10, 2007	9,139,503	Sep 22, 2015	METHOD FOR THE PRODUCTION OF DIMETHYL ETHER	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,632,426	May 28, 2008	2632426	Aug 30, 2011	STRONGBACK TRAVELING CLAMP	J. Ray McDermott S.A.
CA	Issued	2,717,895	Jun 23, 2009	2717895	May 14, 2013	IMPROVED SEPARATION PROCESS FOR OLEFIN PRODUCTION	LUMMUS TECHNOLOGY INC.
US	Issued	12/163,031	Jun 27, 2008	7,842,847	Nov 30, 2010	Separation process for olefin production	LUMMUS TECHNOLOGY INC.
CA	Issued	2,770,311	Aug 5, 2010	2770311	Sep 12, 2017	PROCESS FOR THE PRODUCTION OF BUTADIENE	LUMMUS TECHNOLOGY INC.
US	Issued	12/542,565	Aug 17, 2009	8,293,960	Oct 23, 2012	Process for the production of butadiene	LUMMUS TECHNOLOGY INC.
US	Issued	13/653,820	Oct 17, 2012	8,933,284	Jan 13, 2015	Process for the production of butadiene	LUMMUS TECHNOLOGY INC.
CA	Issued	2,731,951	Jun 23, 2009	2731951	Aug 18, 2015	HIGH ENERGY REDUCTION IN A PROPANE DEHYDROGENATION UNIT BY UTILIZING A HIGH PRESSURE PRODUCT SPLITTER COLUMN	LUMMUS TECHNOLOGY INC.

CA	Issued	2,891,029	Jun 23, 2009	2891029	Apr 11, 2017	HIGH ENERGY REDUCTION IN A PROPANE DEHYDROGENATION UNIT BY UTILIZING A HIGH PRESSURE PRODUCT SPLITTER COLUMN	LUMMUS TECHNOLOGY INC.
US	Issued	12/183,034	Jul 30, 2008	8,013,201	Sep 6, 2011	HIGH ENERGY REDUCTION IN A PROPANE DEHYDROGENATION UNIT BY UTILIZING A HIGH PRESSURE PRODUCT SPLITTER COLUMN	LUMMUS TECHNOLOGY INC.
US	Issued	13/226,083	Sep 6, 2011	8,349,263	Jan 8, 2013	HIGH ENERGY REDUCTION IN A PROPANE DEHYDROGENATION UNIT BY UTILIZING A HIGH PRESSURE PRODUCT SPLITTER COLUMN	LUMMUS TECHNOLOGY INC.
CA	Issued	2,723,831	Apr 30, 2009	2723831	Feb 9, 2016	ISO-PRESSURE OPEN REFRIGERATION NGL RECOVERY	LUMMUS TECHNOLOGY INC.
US	Issued	12/121,880	May 16, 2008	8,209,997	Jul 3, 2012	ISO-PRESSURE OPEN REFRIGERATION NGL RECOVERY	LUMMUS TECHNOLOGY INC.
US	Issued	13/493,267	Jun 11, 2012	8,413,463	Apr 9, 2013	ISO-PRESSURE OPEN REFRIGERATION NGL RECOVERY	LUMMUS TECHNOLOGY INC.
US	Issued	13/858,585	Apr 8, 2013	9,291,387	Mar 22, 2016	ISO-PRESSURE OPEN REFRIGERATION NGL RECOVERY	LUMMUS TECHNOLOGY INC.
US	Issued	12/195,016	Aug 20, 2008	7,745,674	Jun 29, 2010	ALKYLATION SLURRY REACTOR	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/134,652	Jun 6, 2008	8,153,854	Apr 10, 2012	GASOLINE ALKYLATE RVP CONTROL	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/334,009	Dec 12, 2008	8,084,661	Dec 27, 2011	EXTRACTION OF ASO FROM SPENT SULFURIC ACID USING LIQUID SO2	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/023,390	Jan 31, 2008	7,977,525	Jul 12, 2011	H2SO4 ALKYLATION BY CONVERSION OF OLEFIN FEED TO OLIGOMERS AND SULFATE ESTERS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/234,153	Sep 19, 2008	8,034,988	Oct 11, 2011	PROCESS FOR THE ALKYLATION OF ISOBUTANE WITH DILUTE PROPYLENE	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/029,283	Feb 11, 2008	7,851,645	Dec 14, 2010	PROCESS FOR CONTINUOUS PRODUCTION OF ORGANIC CARBONATES OR ORGANIC CARBAMATES AND SOLID CATALYSTS THEREFORE	CATALYTIC DISTILLATION TECHNOLOGIES

US	Issued	12/914,198	Oct 28, 2010	8,222,444	Jul 17, 2012	PROCESS FOR CONTINUOUS PRODUCTION OF ORGANIC CARBONATES OR ORGANIC CARBAMATES AND SOLID CATALYSTS THEREFORE	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/914,255	Oct 28, 2010	8,361,919	Jan 29, 2013	PROCESS FOR CONTINUOUS PRODUCTION OF ORGANIC CARBONATES OR ORGANIC CARBAMATES AND SOLID CATALYSTS THEREFORE	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/914,290	Oct 28, 2010	8,415,495	Apr 9, 2013	PROCESS FOR CONTINUOUS PRODUCTION OF ORGANIC CARBONATES OR ORGANIC CARBAMATES AND SOLID CATALYSTS THEREFORE	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/195,113	Aug 20, 2008	8,168,843	May 1, 2012	REFORMATE BENZENE REDUCTION VIA TRANSALKYLATION	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/195,118	Aug 20, 2008	8,101,810	Jan 24, 2012	REFORMATE BENZENE REDUCTION VIA ALKYLATION	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/368,621	Feb 10, 2009	8,143,466	Mar 27, 2012	PROCESS FOR BENZENE REMOVAL FROM GASOLINE	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/206,039	Sep 8, 2008	9,315,741	Apr 19, 2016	PROCESS FOR ULTRA LOW BENZENE REFORMATE USING CATALYTIC DISTILLATION	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,661,363	Mar 31, 2009	2661363	Dec 7, 2010	METHOD OF BUILDING ELEVATED WATER STORAGE TANKS	Chicago Bridge & Iron Company (IL)
US	Issued	13/568,566	Aug 7, 2012	8,820,009	Sep 2, 2014	METHOD OF BUILDING ELEVATED WATER STORAGE TANKS	Chicago Bridge & Iron Company (IL)
US	Issued	12/112,574	Apr 30, 2008	8,261,510	Sep 11, 2012	METHOD OF BUILDING ELEVATED WATER STORAGE TANKS	Chicago Bridge & Iron Company (IL)
CA	Issued	2,732,871	Aug 5, 2009	2732871	Jul 16, 2013	METHOD AND APPARATUS FOR INSULATING A VOID IN A COMPONENT OF A LOW-TEMPERATURE OR CRYOGENIC STORAGE TANK	Chicago Bridge & Iron Company (IL)
US	Issued	13/547,739	Jul 12, 2012	8,545,132	Oct 1, 2013	Method and apparatus for insulating a component of a low-temperature or cryogenic storage tank	Chicago Bridge & Iron Company (IL)

US	Issued	12/186,039	Aug 5, 2008	8,240,344	Aug 14, 2012	Method and apparatus for insulating a component of a low-temperature or cryogenic storage tank	Chicago Bridge & Iron Company (IL)
CA	Issued	2,764,971	Jun 16, 2010	2764971	May 6, 2014	MULTISTAGE RESID HYDROCRACKING	LUMMUS TECHNOLOGY INC.
US	Issued	12/490,089	Jun 23, 2009	8,287,720	Oct 16, 2012	Multistage resid hydrocracking	LUMMUS TECHNOLOGY INC.
US	Issued	13/491,147	Jun 7, 2012	9,441,174	Sep 13, 2016	MULTISTAGE RESID HYDROCRACKING	LUMMUS TECHNOLOGY INC.
US	Issued	15/229,530	Aug 5, 2016	9,873,839	Jan 23, 2018	MULTISTAGE RESID HYDROCRACKING	LUMMUS TECHNOLOGY INC.
CA	Issued	2,750,334	Jul 8, 2010	2750334	Sep 30, 2014	PRE-SULFIDING AND PRE-CONDITIONING OF RESIDUUM HYDROCONVERSION CATALYSTS FOR EBULLATED-BED HYDROCONVERSION PROCESSES	LUMMUS TECHNOLOGY INC.
US	Issued	12/509,252	Jul 24, 2009	9,523,048	Dec 20, 2016	Pre-sulfiding and pre-conditioning of residuum hydroconversion catalysts for ebullated-bed hydroconversion processes	LUMMUS TECHNOLOGY INC.
US	Issued	12/049,114	Mar 14, 2008	8,471,082	Jun 25, 2013	PROCESS FOR CONVERTING METHANE TO ETHYLENE	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/326,488	Dec 2, 2008	8,853,483	Oct 7, 2014	OLIGOMERIZATION PROCESS	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,712,187	Jan 13, 2009	2712187	Jun 25, 2013	PROPYLENE OLIGOMERIZATION PROCESS	CATALYTIC DISTILLATION TECHNOLOGIES; EXXONMOBIL CHEMICAL PATENTS INC.
US	Issued	12/014,406	Jan 15, 2008	7,649,123	Jan 19, 2010	PROPYLENE OLIGOMERIZATION PROCESS	CATALYTIC DISTILLATION TECHNOLOGIES; EXXONMOBIL CHEMICAL PATENTS INC.
CA	Issued	2,709,803	Oct 9, 2008	2709803	Mar 22, 2016	CONTAMINANT REMOVAL FROM A GAS STREAM	LUMMUS TECHNOLOGY INC.
CA	Published	2,888,086	Apr 15, 2015			CONTAMINANT REMOVAL FROM A GAS STREAM	LUMMUS TECHNOLOGY INC.
US	Issued	11/862,013	Jan 31, 2008	7,682,424	Mar 23, 2010	CONTAMINANT REMOVAL FROM A GAS STREAM	LUMMUS TECHNOLOGY INC.
CA	Issued	2,739,498	Dec 17, 2009	2739498	Mar 25, 2014	GASIFICATION SYSTEM AND PROCESS WITH STAGED SLURRY ADDITION	LUMMUS TECHNOLOGY INC.
US	Issued	12/640,226	Dec 17, 2009	7,959,829	Jun 14, 2011	GASIFICATION SYSTEM AND PROCESS WITH STAGED SLURRY ADDITION	LUMMUS TECHNOLOGY INC.
US	Issued	13/078,461	Apr 1, 2011	8,088,188	Jan 3, 2012	GASIFICATION SYSTEM AND PROCESS WITH STAGED SLURRY ADDITION	LUMMUS TECHNOLOGY INC.

CA	Issued	2,728,604	Jun 23, 2009	2728604	Aug 27, 2013	TWO STAGE ENTRAINED GASIFICATION SYSTEM AND PROCESS	LUMMUS TECHNOLOGY INC.
CA	Issued	2,820,088	Jun 23, 2009	2820088	Mar 31, 2015	TWO STAGE ENTRAINED GASIFICATION SYSTEM AND PROCESS	LUMMUS TECHNOLOGY INC.
CA	Issued	2,820,091	Jun 23, 2009	2820091	Mar 14, 2017	TWO STAGE ENTRAINED GASIFICATION SYSTEM AND PROCESS	LUMMUS TECHNOLOGY INC.
US	Issued	12/192,471	Aug 15, 2008	8,460,410	Jun 11, 2013	TWO STAGE ENTRAINED GASIFICATION SYSTEM AND PROCESS	LUMMUS TECHNOLOGY INC.
US	Issued	13/889,463	May 8, 2013	8,888,876	Nov 18, 2014	TWO STAGE ENTRAINED GASIFICATION SYSTEM AND PROCESS	LUMMUS TECHNOLOGY INC.
US	Issued	12/023,193	Jan 31, 2008	7,682,582	Mar 23, 2010	SIMULTANEOUS REMOVAL OF H2S AND SO2 FROM TAIL GASES	LUMMUS TECHNOLOGY INC.
US	Issued	12/054,068	Mar 24, 2008	7,687,047	Mar 30, 2010	NOVEL SULFUR RECOVERY PROCESS	LUMMUS TECHNOLOGY INC.
US	Issued	12/635,244	Dec 10, 2009	8,252,073	Aug 28, 2012	TAR-FREE GASIFICATION SYSTEM AND PROCESS	LUMMUS TECHNOLOGY INC.
CA	Issued	2,739,114	Sep 14, 2009	2739114	Nov 19, 2013	MULTIPLE FIXED-FLUIDIZED BEDS FOR CONTAMINANT REMOVAL	LUMMUS TECHNOLOGY INC.
US	Issued	12/551,190	Aug 31, 2009	8,500,851	Aug 6, 2013	MULTIPLE FIXED-FLUIDIZED BEDS FOR CONTAMINANT REMOVAL	LUMMUS TECHNOLOGY INC.
US	Issued	13/958,815	Aug 5, 2013	8,685,151	Apr 1, 2014	MULTIPLE FIXED-FLUIDIZED BEDS FOR CONTAMINANT REMOVAL	LUMMUS TECHNOLOGY INC.
CA	Issued	2,748,877	Jun 30, 2010	2748877	Dec 1, 2015	CATALYST FOR METATHESIS OF ETHYLENE AND 2-BUTENE AND/OR DOUBLE BOND ISOMERIZATION	LUMMUS TECHNOLOGY INC.
CA	Issued	2,826,975	Jun 30, 2010	2826975	Nov 24, 2015	CATALYST FOR METATHESIS OF ETHYLENE AND 2-BUTENE AND/OR DOUBLE BOND ISOMERIZATION	LUMMUS TECHNOLOGY INC.
US	Issued	12/506,615	Jul 21, 2009	8,586,813	Nov 19, 2013	CATALYST FOR METATHESIS OF ETHYLENE AND 2-BUTENE AND/OR DOUBLE BOND ISOMERIZATION	LUMMUS TECHNOLOGY INC.
US	Issued	14/076,613	Nov 11, 2013	9,040,764	May 26, 2015	CATALYST FOR METATHESIS OF ETHYLENE AND 2-BUTENE AND/OR DOUBLE BOND ISOMERIZATION	LUMMUS TECHNOLOGY INC.

US	Issued	12/757,384	Apr 9, 2010	8,591,725	Nov 26, 2013	DEPOSIT MITIGATION IN GASOLINE FRACTIONATION, QUENCH WATER SYSTEM AND PRODUCT RECOVERY SECTION	LUMMUS TECHNOLOGY INC.
US	Issued	12/260,751	Oct 29, 2008	8,399,728	Mar 19, 2013	Absorber demethanizer for methanol to olefins process	LUMMUS TECHNOLOGY INC.
US	Issued	13/070,722	Mar 24, 2011	9,139,491	Sep 22, 2015	METHANOL TO OLEFINS PROCESS	LUMMUS TECHNOLOGY INC.
US	Issued	14/859,870	Sep 21, 2015	9,517,978	Dec 13, 2016	METHANOL TO OLEFINS PROCESS	LUMMUS TECHNOLOGY INC.
CA	Issued	2,733,601	Sep 4, 2009	2733601	Aug 5, 2014	OLEFIN ISOMERIZATION AND METATHESIS CATALYST	LUMMUS TECHNOLOGY INC.; BASF CORPORATION
US	Issued	12/554,805	Sep 4, 2009	8,440,874	May 14, 2013	OLEFIN ISOMERIZATION AND METATHESIS CATALYST	LUMMUS TECHNOLOGY INC.; BASF CORPORATION
US	Issued	13/892,653	May 13, 2013	9,023,753	May 5, 2015	OLEFIN ISOMERIZATION AND METATHESIS CATALYST	LUMMUS TECHNOLOGY INC.; BASF CORPORATION
CA	Issued	2,885,002	Sep 11, 2013	2885002	Nov 29, 2016	PROPYLENE VIA METATHESIS WITH LOW OR NO ETHYLENE	LUMMUS TECHNOLOGY INC.
US	Issued	14/024,986	Sep 12, 2013	9,422,209	Aug 23, 2016	PROPYLENE VIA METATHESIS WITH LOW OR NO ETHYLENE	LUMMUS TECHNOLOGY INC.
US	Issued	12/952,952	Nov 23, 2010	8,445,740	May 21, 2013	Absorber demethanizer for FCC process	LUMMUS TECHNOLOGY INC.
US	Issued	13/846,261	Mar 18, 2013	8,952,211	Feb 10, 2015	Absorber demethanizer for FCC process	LUMMUS TECHNOLOGY INC.
US	Issued	12/260,729	Oct 29, 2008	8,395,008	Mar 12, 2013	PROCESS AND CATALYST FOR CRACKING OF ETHERS AND ALCOHOLS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	13/450,669	Apr 19, 2012	8,829,260	Sep 9, 2014	PROCESS AND CATALYST FOR CRACKING OF ETHERS AND ALCOHOLS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	14/479,844	Sep 8, 2014	9,254,479	Feb 9, 2016	PROCESS AND CATALYST FOR CRACKING OF ETHERS AND ALCOHOLS	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,726,121	May 20, 2009	2726121	Oct 28, 2014	VERTICAL COMBINED FEED/EFFLUENT HEAT EXCHANGER WITH VARIABLE BAFFLE ANGLE	LUMMUS TECHNOLOGY INC.
US	Issued	12/198,398	Aug 26, 2008	7,614,209	Nov 10, 2009	Mechanically releasable shackle pin	J. Ray McDermott S.A.
CA	Issued	2,885,707	Aug 14, 2013	2885707	May 2, 2017	BUTADIENE EXTRACTION PRE-ABSORBER	LUMMUS TECHNOLOGY INC.
US	Issued	14/030,186	Sep 18, 2013	9,403,739	Aug 2, 2016	BUTADIENE EXTRACTION PRE-ABSORBER	LUMMUS TECHNOLOGY INC.
US	Issued	15/204,167	Jul 7, 2016	10,081,581	Sep 25, 2018	BUTADIENE EXTRACTION PRE-ABSORBER	LUMMUS TECHNOLOGY INC.

CA	Issued	2,724,464	May 8, 2009	2724464	Feb 28, 2017	CARBON DIOXIDE PURIFICATION	LUMMUS TECHNOLOGY INC.
US	Issued	12/123,904	May 20, 2008	8,337,587	Dec 25, 2012	CARBON DIOXIDE PURIFICATION	LUMMUS TECHNOLOGY INC.
US	Issued	13/724,095	Dec 21, 2012	8,628,601	Jan 14, 2014	CARBON DIOXIDE PURIFICATION	LUMMUS TECHNOLOGY INC.
CA	Issued	2,694,648	Feb 25, 2010	2694648	Aug 30, 2016	NITROGEN REMOVAL WITH ISO-PRESSURE OPEN REFRIGERATION NATURAL GAS LIQUIDS RECOVERY	LUMMUS TECHNOLOGY INC.
US	Issued	12/397,837	Mar 4, 2009	8,627,681	Jan 14, 2014	NITROGEN REMOVAL WITH ISO-PRESSURE OPEN REFRIGERATION NATURAL GAS LIQUIDS RECOVERY	LUMMUS TECHNOLOGY INC.
US	Issued	14/141,064	Dec 26, 2013	9,074,815	Jul 7, 2015	NITROGEN REMOVAL WITH ISO-PRESSURE OPEN REFRIGERATION NATURAL GAS LIQUIDS RECOVERY	LUMMUS TECHNOLOGY INC.
US	Issued	14/751,562	Jun 26, 2015	9,534,837	Jan 3, 2017	NITROGEN REMOVAL WITH ISO-PRESSURE OPEN REFRIGERATION NATURAL GAS LIQUIDS RECOVERY	LUMMUS TECHNOLOGY INC.
CA	Issued	2,753,521	Apr 6, 2010	2753521	Jan 19, 2016	DEVICES FOR INJECTION OF GASEOUS STREAMS INTO A BED OF FLUIDIZED SOLIDS	LUMMUS TECHNOLOGY INC.
CA	Issued	2,905,483	Apr 6, 2010	2905483	Jun 20, 2017	DEVICES FOR INJECTION OF GASEOUS STREAMS INTO A BED OF FLUIDIZED SOLIDS	LUMMUS TECHNOLOGY INC.
US	Issued	12/418,943	Apr 6, 2009	8,092,755	Jan 10, 2012	DEVICES FOR INJECTION OF GASEOUS STREAMS INTO A BED OF FLUIDIZED SOLIDS	LUMMUS TECHNOLOGY INC.
US	Issued	13/314,394	Dec 8, 2011	8,480,965	Jul 9, 2013	DEVICES FOR INJECTION OF GASEOUS STREAMS INTO A BED OF FLUIDIZED SOLIDS	LUMMUS TECHNOLOGY INC.
US	Issued	13/936,899	Jul 8, 2013	8,877,138	Nov 4, 2014	DEVICES FOR INJECTION OF GASEOUS STREAMS INTO A BED OF FLUIDIZED SOLIDS	LUMMUS TECHNOLOGY INC.
US	Issued	12/243,459	Oct 1, 2008	8,119,848	Feb 21, 2012	PREPARATION OF ALKYLATION FEED	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,712,211	Jan 9, 2009	2712211	Sep 17, 2013	PROCESS TO HYDRODESULFURIZE FCC GASOLINE RESULTING IN A LOW-MERCAPTAN PRODUCT	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/340,184	Dec 19, 2008	8,043,495	Oct 25, 2011	PROCESS TO HYDRODESULFURIZE FCC GASOLINE RESULTING IN A LOW-MERCAPTAN PRODUCT	CATALYTIC DISTILLATION TECHNOLOGIES

US	Issued	13/237,400	Sep 20, 2011	8,236,172	Aug 7, 2012	PROCESS TO HYDRODESULFURIZE FCC GASOLINE RESULTING IN A LOW-MERCAPTAN PRODUCT	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/021,851	Jan 29, 2008	7,927,480	Apr 19, 2011	PROCESS FOR DESULFURIZATION OF CRACKED NAPHTHA	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/720,173	Mar 9, 2010	8,395,002	Mar 12, 2013	USE OF CATALYTIC DISTILLATION FOR BENZENE SEPARATION AND PURIFICATION	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/906,426	Oct 18, 2010	9,272,965	Mar 1, 2016	PROCESS FOR THE CONVERSION OF ALCOHOLS TO OLEFINS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/350,539	Jan 8, 2009	8,124,819	Feb 28, 2012	OLIGOMERIZATION PROCESS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/352,198	Jan 12, 2009	8,492,603	Jul 23, 2013	SELECTIVATED ISOOLEFIN DIMERIZATION USING METALIZED RESINS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/558,353	Sep 11, 2009	8,502,006	Aug 6, 2013	DIMERIZATION PROCESS	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,746,195	Jan 6, 2010	2,746,195	Oct 29, 2013	METHODS AND SYSTEMS FOR TREATING A GASIFICATION SLAG PRODUCT	LUMMUS TECHNOLOGY INC.
US	Issued	12/652,318	Jan 5, 2010	9,074,149	Jul 7, 2015	METHODS AND SYSTEMS FOR TREATING A GASIFICATION SLAG PRODUCT	LUMMUS TECHNOLOGY INC.
CA	Issued	2,779,237	Oct 20, 2010	2,779,237	Apr 17, 2018	FLUX ADDITION AS A FILTER CONDITIONER	LUMMUS TECHNOLOGY INC.
US	Issued	12/698,660	Feb 2, 2010	8,580,151	Nov 12, 2013	FLUX ADDITION AS A FILTER CONDITIONER	LUMMUS TECHNOLOGY INC.
US	Issued	14/062,946	Oct 25, 2013	9,089,798	Jul 28, 2015	FLUX ADDITION AS A FILTER CONDITIONER	LUMMUS TECHNOLOGY INC.
CA	Issued	2,755,353	Mar 30, 2010	2,755,353	Jun 17, 2014	TWO STAGE DRY FEED GASIFICATION SYSTEM AND PROCESS	LUMMUS TECHNOLOGY INC.
US	Issued	12/732,290	Mar 26, 2010	8,357,216	Jan 22, 2013	TWO STAGE DRY FEED GASIFICATION SYSTEM AND PROCESS	LUMMUS TECHNOLOGY INC.
US	Issued	13/713,572	Dec 13, 2012	9,140,447	Sep 22, 2015	TWO STAGE DRY FEED GASIFICATION PROCESS	LUMMUS TECHNOLOGY INC.
US	Issued	13/713,812	Dec 13, 2012	9,175,847	Nov 3, 2015	TWO STAGE DRY FEED GASIFICATION SYSTEM	LUMMUS TECHNOLOGY INC.
US	Issued	12/784,642	May 21, 2010	8,309,617	Nov 13, 2012	RECYCLING METHANE-RICH PURGE GAS TO GASIFIER	LUMMUS TECHNOLOGY INC.
US	Issued	12/540,165	Aug 12, 2009	8,378,150	Feb 19, 2013	PROCESS FOR THE PRODUCTION OF DIMETHYL ETHER	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	13/753,976	Jan 30, 2013	9,481,624	Nov 1, 2016	PROCESS FOR THE PRODUCTION OF DIMETHYL ETHER	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/364,961	Feb 3, 2009	7,982,086	Jul 19, 2011	DEISOBUTENIZER	CATALYTIC DISTILLATION TECHNOLOGIES
US	Published	14/861,439	Sep 22, 2015			LIQUID NATURAL GAS VAPORIZATION	LUMMUS TECHNOLOGY INC.

US	Issued	12/401,925	Mar 11, 2009	8,572,817	Nov 5, 2013	Subsea transfer hook adaptor	J. Ray McDermott S.A.
US	Issued	12/429,229	Apr 24, 2009	7,849,810	Dec 14, 2010	MATING OF BUOYANT HULL STRUCTURE WITH TRUSS STRUCTURE	J. Ray McDermott S.A.
CA	Issued	2,749,825	Mar 11, 2010	2749825	Aug 27, 2013	METHOD OF PROVIDING HEAT FOR CHEMICAL CONVERSION AND A PROCESS AND SYSTEM EMPLOYING THE METHOD FOR THE PRODUCTION OF OLEFIN	LUMMUS TECHNOLOGY INC.
US	Issued	12/381,800	Mar 17, 2009	8,163,971	Apr 24, 2012	METHOD OF PROVIDING HEAT FOR CHEMICAL CONVERSION AND A PROCESS AND SYSTEM EMPLOYING THE METHOD FOR THE PRODUCTION OF OLEFIN	LUMMUS TECHNOLOGY INC.
US	Issued	14/034,822	Sep 24, 2013	9,409,837	Aug 9, 2016	BUTADIENE EXTRACTION PROCESS	LUMMUS TECHNOLOGY INC.
US	Issued	15/230,817	Aug 8, 2016	10,118,876	Nov 6, 2018	BUTADIENE EXTRACTION PROCESS	LUMMUS TECHNOLOGY INC.
US	Issued	12/720,975	Mar 10, 2010	8,314,280	Nov 20, 2012	PROCESS FOR THE PRODUCTION OF OLEFINS	LUMMUS TECHNOLOGY INC.
US	Issued	13/606,661	Sep 7, 2012	8,389,789	Mar 5, 2013	PROCESS FOR THE PRODUCTION OF OLEFINS	LUMMUS TECHNOLOGY INC.
CA	Issued	2,797,424	May 10, 2011	2797424	Jan 26, 2016	PRODUCTION OF JET AND OTHER HEAVY FUELS FROM ISOBUTANOL	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	13/104,572	May 10, 2011	9,688,590	Jun 27, 2017	PRODUCTION OF JET AND OTHER HEAVY FUELS FROM ISOBUTANOL	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,782,437	Jan 6, 2011	2782437	Feb 5, 2019	PRODUCING LOW METHANE SYNGAS FROM A TWO-STAGE GASIFIER	LUMMUS TECHNOLOGY INC.
US	Issued	12/985,051	Jan 5, 2011	9,611,437	Apr 4, 2017	PRODUCING LOW METHANE SYNGAS FROM A TWO-STAGE GASIFIER	LUMMUS TECHNOLOGY INC.
CA	Issued	2,808,135	Sep 13, 2011	2808135	May 1, 2018	LOW TEMPERATURE SULFUR TOLERANT TAR REMOVAL WITH CONCOMITANT SYNTHESIS GAS CONDITIONING	LUMMUS TECHNOLOGY INC.
US	Issued	13/811,161	Sep 13, 2011	8,815,962	Aug 26, 2014	LOW TEMPERATURE SULFUR TOLERANT TAR REMOVAL WITH CONCOMITANT SYNTHESIS GAS CONDITIONING	LUMMUS TECHNOLOGY INC.
US	Issued	14/335,988	Jul 21, 2014	10,232,356	Mar 19, 2019	LOW TEMPERATURE SULFUR TOLERANT TAR REMOVAL WITH CONCOMITANT SYNTHESIS GAS CONDITIONING	LUMMUS TECHNOLOGY INC.

CA	Published	2,810,530	Sep 13, 2011			LOW TEMPERATURE SULFUR TOLERANT TAR AND SULFUR REMOVAL WITH CONCOMITANT SYNTHESIS GAS CONDITIONING	LUMMUS TECHNOLOGY INC.
US	Issued	13/231,319	Sep 13, 2011	8,945,424	Feb 3, 2015	LOW TEMPERATURE SULFUR TOLERANT TAR AND SULFUR REMOVAL WITH CONCOMITANT SYNTHESIS GAS CONDITIONING	LUMMUS TECHNOLOGY INC.
US	Issued	14/579,415	Dec 22, 2014	9,486,782	Nov 8, 2016	LOW TEMPERATURE SULFUR TOLERANT TAR AND SULFUR REMOVAL WITH CONCOMITANT SYNTHESIS GAS CONDITIONING	LUMMUS TECHNOLOGY INC.
US	Issued	13/031,405	Feb 21, 2011	8,608,406	Dec 17, 2013	LANDING MECHANISM FOR LIFTED PIPE REEL	J. Ray McDermott S.A.
CA	Issued	2,762,157	Dec 14, 2011	2762157	Feb 11, 2014	SPAR HULL LOAD OUT METHOD	J. Ray McDermott S.A.
US	Issued	13/313,185	Dec 7, 2011	8,696,291	Apr 15, 2014	SPAR HULL LOAD OUT METHOD	J. Ray McDermott S.A.
CA	Issued	2,824,440	Nov 16, 2011	2824440	Jan 19, 2016	PRODUCTION OF STYRENE FROM ETHYLBENZENE USING AZEOTROPIC VAPORIZATION AND LOW OVERALL WATER TO ETHYLBENZENE RATIOS	LUMMUS TECHNOLOGY INC.
US	Issued	12/966,258	Dec 13, 2010	8,350,109	Jan 8, 2013	PRODUCTION OF STYRENE FROM ETHYLBENZENE USING AZEOTROPIC VAPORIZATION AND LOW OVERALL WATER TO ETHYLBENZENE RATIOS	LUMMUS TECHNOLOGY INC.
CA	Issued	2,817,065	Oct 18, 2011	2817065	Dec 15, 2015	SELECTIVE DESULFURIZATION OF FCC GASOLINE	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/752,353	Apr 1, 2010	8,486,258	Jul 16, 2013	GASOLINE HYDRODESULFURIZATION AND MEMBRANE UNIT TO REDUCE MERCAPTAN TYPE SULFUR	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,808,620	Jun 7, 2011	2808620	May 17, 2016	HYDROSULFURIZATION PROCESS WITH SELECTED LIQUID RECYCLE TO REDUCE FORMATION OF RECOMBINANT MERCAPTANS	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	12/862,845	Aug 25, 2010	8,628,656	Jan 14, 2014	Hydrodesulfurization process with selected liquid recycle to reduce formation of recombinant mercaptans	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	14/862,902	Sep 23, 2015	9,528,282	Dec 27, 2016	Freestanding elevator platform system	Chicago Bridge & Iron Company (IL)

US	Issued	13/628,983	Sep 27, 2012	9,150,397	Oct 6, 2015	Freestanding elevator platform system	Chicago Bridge & Iron Company (IL)
CA	Issued	2,835,895	May 10, 2012	2835895	Jun 21, 2016	METHOD FOR PRODUCING HIGH VCM COKE	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	13/469,593	May 11, 2012	9,062,256	Jun 23, 2015	METHOD FOR PRODUCING HIGH VCM COKE	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	14/744,462	Jun 19, 2015	10,000,705	Jun 19, 2018	METHOD FOR PRODUCING HIGH VCM COKE	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,879,613	Jul 11, 2013	2879613	Mar 14, 2017	COKE CATCHER	LUMMUS TECHNOLOGY INC.
US	Issued	13/554,460	Jul 20, 2012	8,647,415	Feb 11, 2014	COKE CATCHER	LUMMUS TECHNOLOGY INC.
CA	Issued	2,782,928	Jul 11, 2012	2782928	Aug 26, 2014	PIPE REEL LOAD SIMULATOR	J. Ray McDermott S.A.
US	Issued	13/181,690	Jul 13, 2011	8,443,680	May 21, 2013	PIPE REEL LOAD SIMULATOR	J. Ray McDermott S.A.
CA	Issued	2,890,134	Oct 15, 2013	2890134	May 16, 2017	BUTADIENE EXTRACTION PROCESS FEATURING LIQUID RING COMPRESSOR	LUMMUS TECHNOLOGY INC.
US	Issued	14/058,637	Oct 21, 2013	9,296,667	Mar 29, 2016	BUTADIENE EXTRACTION PROCESS	LUMMUS TECHNOLOGY INC.
US	Issued	15/059,771	Mar 3, 2016	9,744,475	Aug 29, 2017	BUTADIENE EXTRACTION PROCESS	LUMMUS TECHNOLOGY INC.
CA	Issued	2,890,070	Oct 9, 2013	2890070	Nov 28, 2017	SEPARATION OF BUTENES BY EXTRACTIVE DISTILLATION USING POLAR SOLVENT	LUMMUS TECHNOLOGY INC.
US	Issued	14/058,607	Oct 21, 2013	9,409,838	Aug 9, 2016	SELECTIVE OLEFIN EXTRACTION	LUMMUS TECHNOLOGY INC.
US	Issued	15/196,297	Jun 29, 2016	9,776,103	Oct 3, 2017	SELECTIVE OLEFIN EXTRACTION	LUMMUS TECHNOLOGY INC.
CA	Issued	2,887,299	Sep 19, 2013	2887299	Nov 26, 2019	FLEXIBLE BUTADIENE EXTRACTION PROCESS	LUMMUS TECHNOLOGY INC.
US	Issued	14/034,806	Sep 24, 2013	9,611,195	Apr 4, 2017	FLEXIBLE BUTADIENE EXTRACTION PROCESS	LUMMUS TECHNOLOGY INC.
US	Issued	15/477,693	Apr 3, 2017	10,144,682	Dec 4, 2018	FLEXIBLE BUTADIENE EXTRACTION PROCESS	LUMMUS TECHNOLOGY INC.
CA	Issued	2,878,908	Jul 10, 2013	2878908	Feb 28, 2017	FLUID CATALYTIC CRACKING PROCESS AND APPARATUS FOR MAXIMIZING LIGHT OLEFINS OR MIDDLE DISTILLATES AND LIGHT OLEFINS	LUMMUS TECHNOLOGY INC.
US	Issued	13/547,807	Jul 12, 2012	9,452,404	Sep 27, 2016	Fluid cracking process and apparatus for maximizing light olefins or middle distillates and light olefins	LUMMUS TECHNOLOGY INC.
US	Issued	15/275,802	Sep 26, 2016	10,184,088	Jan 22, 2019	FLUID CATALYTIC CRACKING PROCESS AND APPARATUS FOR MAXIMIZING LIGHT OLEFINS OR MIDDLE DISTILLATES AND LIGHT OLEFINS	LUMMUS TECHNOLOGY INC.
CA	Issued	2,893,271	Nov 27, 2013	2893271	Jul 18, 2017	SELF-JACKING SCAFFOLD FOR LARGE CYLINDRICAL TANKS	Chicago Bridge & Iron Company (IL)
US	Issued	14/939,199	Nov 12, 2015	9,556,626	Jan 31, 2017	SELF-JACKING SCAFFOLD FOR LARGE CYLINDRICAL TANKS	Chicago Bridge & Iron Company (IL)

US	Issued	14/090,901	Nov 26, 2013	9,217,255	Dec 22, 2015	SELF-JACKING SCAFFOLD FOR LARGE CYLINDRICAL TANKS	Chicago Bridge & Iron Company (IL)
CA	Issued	2,880,515	Jul 15, 2013	2880515	Aug 20, 2019	RESIDUE HYDROCRACKING	LUMMUS TECHNOLOGY INC.
US	Issued	15/336,108	Oct 27, 2016	10,221,366	Mar 5, 2019	RESIDUE HYDROCRACKING	LUMMUS TECHNOLOGY INC.
CA	Issued	2,885,717	Sep 4, 2013	2885717	Oct 16, 2018	COKE DRUM ADDITIVE INJECTION	LUMMUS TECHNOLOGY INC.
US	Issued	14/030,219	Sep 18, 2013	9,969,937	May 15, 2018	COKE DRUM ADDITIVE INJECTION	LUMMUS TECHNOLOGY INC.
CA	Issued	2,897,212	Jan 20, 2014	2897212	Sep 10, 2019	RESIDUE HYDROCRACKING PROCESSING	LUMMUS TECHNOLOGY INC.
US	Published	13/758,429	Feb 4, 2013			RESIDUE HYDROCRACKING PROCESSING	LUMMUS TECHNOLOGY INC.
US	Issued	13/757,203	Feb 1, 2013	9,080,113	Jul 14, 2015	UPGRADING RAW SHALE DERIVED CRUDE OILS TO HYDROCARBON DISTILLATE FUELS	LUMMUS TECHNOLOGY INC.
US	Issued	14/793,045	Jul 7, 2015	9,725,661	Aug 8, 2017	UPGRADING RAW SHALE DERIVED CRUDE OILS TO HYDROCARBON DISTILLATE FUELS	LUMMUS TECHNOLOGY INC.
CA	Issued	2,898,191	Jan 10, 2014	2898191	Jan 22, 2019	CONVERSION OF ASPHALTENIC PITCH WITHIN AN EBULLATED BED RESIDUUM HYDROCRACKING PROCESS	LUMMUS TECHNOLOGY INC.
US	Issued	13/743,936	Jan 17, 2013	9,028,674	May 12, 2015	Conversion of asphaltenic pitch within an ebullated bed residuum hydrocracking process	LUMMUS TECHNOLOGY INC.
US	Issued	14/685,798	Apr 14, 2015	9,687,804	Jun 27, 2017	CONVERSION OF ASPHALTENIC PITCH WITHIN AN EBULLATED BED RESIDUE HYDROCRACKING PROCESS	LUMMUS TECHNOLOGY INC.
US	Issued	13/711,140	Dec 11, 2012	9,024,096	May 5, 2015	Conversion of triacylglycerides-containing oils	LUMMUS TECHNOLOGY INC.
US	Issued	14/685,781	Apr 14, 2015	9,675,956	Jun 13, 2017	Conversion of triacylglycerides-containing oils	LUMMUS TECHNOLOGY INC.
CA	Issued	2,902,258	Mar 5, 2014	2902258	Aug 29, 2017	INTEGRATION OF RESIDUE HYDROCRACKING AND HYDROTREATING	LUMMUS TECHNOLOGY INC.
US	Issued	14/185,237	Feb 20, 2014	9,650,312	May 16, 2017	Integration of residue hydrocracking and hydrotreating	LUMMUS TECHNOLOGY INC.
US	Issued	14/197,969	Mar 5, 2014	9,440,894	Sep 13, 2016	Integration of residue hydrocracking and hydrotreating	LUMMUS TECHNOLOGY INC.
CA	Issued	2,896,247	Jan 31, 2014	2896247	Aug 14, 2018	INTERGRATION OF RESIDUE HYDROCRACKING AND SOLVENT DEASPHALTING	LUMMUS TECHNOLOGY INC.

US	Published	15/848,666	Dec 20, 2017			SYSTEM FOR UPGRADING RESIDUUM HYDROCARBONS	LUMMUS TECHNOLOGY INC.
US	Issued	14/180,623	Feb 14, 2014	9,631,150	Apr 25, 2017	HYDROPROCESSING THERMALLY CRACKED PRODUCTS	LUMMUS TECHNOLOGY INC.
US	Issued	15/460,786	Mar 16, 2017	10,385,283	Aug 20, 2019	HYDROPROCESSING THERMALLY CRACKED PRODUCTS	LUMMUS TECHNOLOGY INC.
CA	Issued	2,877,691	Jun 26, 2013	2,877,691	Jun 12, 2018	TWO STAGE GASIFICATION WITH DUAL QUENCH	LUMMUS TECHNOLOGY INC.
US	Issued	14/411,015	Jun 26, 2013	9,567,538	Feb 14, 2017	TWO STAGE GASIFICATION WITH DUAL QUENCH	LUMMUS TECHNOLOGY INC.
CA	Issued	2,893,331	Nov 11, 2013	2,893,331	Nov 6, 2018	THERMAL SENSING SYSTEM	LUMMUS TECHNOLOGY INC.
US	Issued	14/079,065	Nov 13, 2013	9,766,133	Sep 19, 2017	THERMAL SENSING SYSTEM	LUMMUS TECHNOLOGY INC.
US	Issued	14/069,737	Nov 1, 2013	9,499,458	Nov 22, 2016	PROCESS TO PRODUCE LINEAR PENTENES AND METATHESIS THEREOF	LUMMUS TECHNOLOGY INC.
US	Issued	15/224,951	Aug 1, 2016	9,790,146	Oct 17, 2017	PROCESS TO PRODUCE LINEAR PENTENES AND METATHESIS THEREOF	LUMMUS TECHNOLOGY INC.
US	Issued	14/069,758	Nov 1, 2013	9,422,210	Aug 23, 2016	RECOVERY OF ETHYLENE FROM METHANOL TO OLEFINS PROCESS	LUMMUS TECHNOLOGY INC.
US	Issued	15/233,009	Aug 10, 2016	10,011,541	Jul 3, 2018	RECOVERY OF ETHYLENE FROM METHANOL TO OLEFINS PROCESS	LUMMUS TECHNOLOGY INC.
US	Issued	14/548,460	Nov 20, 2014	9,975,819	May 22, 2018	OLEFIN DOUBLE BOND ISOMERIZATION CATALYST WITH HIGH POISON RESISTANCE	LUMMUS TECHNOLOGY INC.
US	Published	15/985,242	May 21, 2018			OLEFIN DOUBLE BOND ISOMERIZATION CATALYST WITH HIGH POISON RESISTANCE	LUMMUS TECHNOLOGY INC.
US	Issued	14/589,112	Jan 5, 2015	9,695,958	Jul 4, 2017	Offshore Horizontal Product Lay Arrangement	J. Ray McDermott S.A.
US	Issued	15/625,333	Jun 16, 2017	9,995,413	Jun 12, 2018	Offshore Horizontal Product Lay Arrangement	J. Ray McDermott S.A.
US	Issued	13/433,450	Mar 29, 2012	9,261,49082	Feb 16, 2016	ULTRASONIC TRANSDUCER ARRANGEMENT	J. Ray McDermott S.A.
US	Issued	13/676,327	Nov 14, 2012	8,747,025	Jun 10, 2014	OFFSHORE CABLE LAYING METHOD	J. Ray McDermott S.A.
US	Issued	13/676,327	Nov 14, 2012	8,747,025	Jun 10, 2014	OFFSHORE CABLE LAYING METHOD	J. Ray McDermott S.A.
US	Issued	14/052,972	Oct 14, 2013	9,914,672	Mar 13, 2018	CONVERSION OF ALCOHOLS TO DISTILLATE FUELS	LUMMUS TECHNOLOGY INC.
US	Published	15/918,666	Mar 12, 2018			CONVERSION OF ALCOHOLS TO DISTILLATE FUELS	LUMMUS TECHNOLOGY INC.
US	Issued	13/547,164	Jul 12, 2012	9,695,096	Jul 4, 2017	More energy efficient CS hydrogenation process	LUMMUS TECHNOLOGY INC.

CA	Issued	2,883,131	Jul 23, 2013	2883131	Jan 8, 2019	SELECTIVE HYDRODESULFURIZATION OF FCC GASOLINE TO BELOW 10 PPM SULFUR	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	13/968,553	Aug 16, 2013	9,631,149	Apr 25, 2017	SELECTIVE HYDRODESULFURIZATION OF FCC GASOLINE TO BELOW 10 PPM SULFUR	CATALYTIC DISTILLATION TECHNOLOGIES
US	Issued	15/496,918	Apr 25, 2017	10,280,376	May 7, 2019	SELECTIVE HYDRODESULFURIZATION OF FCC GASOLINE TO BELOW 10 PPM SULFUR	CATALYTIC DISTILLATION TECHNOLOGIES
CA	Issued	2,908,540	Feb 21, 2014	2908540	Jan 16, 2018	PROCESS FOR PRODUCING DISTILLATE FUELS AND ANODE GRADE COKE FROM VACUUM RESID	LUMMUS TECHNOLOGY INC.
US	Issued	14/184,099	Feb 19, 2014	9,452,955	Sep 27, 2016	PROCESS FOR PRODUCING DISTILLATE FUELS AND ANODE GRADE COKE FROM VACUUM RESID	LUMMUS TECHNOLOGY INC.
CA	Issued	2,931,241	Feb 3, 2015	2931241	Jan 15, 2019	PROCESSING VACUUM RESIDUUM AND VACUUM GAS OIL IN EBULLATED BED REACTOR SYSTEMS	LUMMUS TECHNOLOGY INC.
US	Issued	14/179,083	Feb 12, 2014	10,208,261	Feb 19, 2019	PROCESSING VACUUM RESIDUUM AND VACUUM GAS OIL IN EBULLATED BED REACTOR SYSTEMS	LUMMUS TECHNOLOGY INC.
US	Pending	16/263,956	Jan 31, 2019			PROCESSING VACUUM RESIDUUM AND VACUUM GAS OIL IN EBULLATED BED REACTOR SYSTEMS	LUMMUS TECHNOLOGY INC.
CA	Published	2,975,325	Jan 22, 2016			STANDPIPE-FLUID BED HYBRID SYSTEM FOR CHAR COLLECTION, TRANSPORT, AND FLOW CONTROL	LUMMUS TECHNOLOGY INC.
US	Issued	15/007,538	Jan 27, 2016	10,392,572	Aug 27, 2019	STANDPIPE-FLUID BED HYBRID SYSTEM FOR CHAR COLLECTION, TRANSPORT, AND FLOW CONTROL	LUMMUS TECHNOLOGY INC.
US	Issued	14/548,509	Nov 20, 2014	9,598,331	Mar 21, 2017	OLEFIN CONVERSION PROCESS	LUMMUS TECHNOLOGY INC.
US	Issued	14/548,500	Nov 20, 2014	9,242,908	Jan 26, 2016	OLEFIN CONVERSION PROCESS	LUMMUS TECHNOLOGY INC.
US	Issued	14/874,789	Oct 5, 2015	9,611,193	Apr 4, 2017	OLEFIN CONVERSION PROCESS	LUMMUS TECHNOLOGY INC.
US	Issued	14/548,475	Nov 20, 2014	9,809,513	Nov 7, 2017	OLEFIN CONVERSION PROCESS	LUMMUS TECHNOLOGY INC.
US	Published	15/792,160	Oct 24, 2017			OLEFIN CONVERSION PROCESS	LUMMUS TECHNOLOGY INC.
CA	Issued	2,904,721	Mar 25, 2014	2904721	Oct 18, 2016	APPARATUS FOR DISTRIBUTING FLOW	LUMMUS TECHNOLOGY INC.
US	Issued	13/851,708	Mar 27, 2013	9,034,084	May 19, 2015	APPARATUS FOR DISTRIBUTING FLOW	LUMMUS TECHNOLOGY INC.
US	Issued	13/845,557	Mar 18, 2013	8,926,225	Jan 6, 2015	LEG MATING UNIT	J. Ray McDermott S.A.

CA	Published	2,968,086	Oct 27, 2015			PROCESS FOR CO-PRODUCING C3 OLEFINS, IC4 OLEFINS, nC4 OLEFINS AND DIOLEFINS, AND/OR C5 OLEFINS AND DIOLEFINS	LUMMUS TECHNOLOGY INC.
US	Issued	14/565,913	Dec 10, 2014	10,017,431	Jul 10, 2018	PROCESS FOR CO-PRODUCING C3 OLEFINS, IC4 OLEFINS, nC4 OLEFINS AND DIOLEFINS, AND/OR C5 OLEFINS AND DIOLEFINS	LUMMUS TECHNOLOGY INC.
US	Issued	16/028,507	Jul 6, 2018	10,207,965	Feb 19, 2019	PROCESS FOR CO-PRODUCING C3 OLEFINS, IC4 OLEFINS, nC4 OLEFINS AND DIOLEFINS, AND/OR C5 OLEFINS AND DIOLEFINS	LUMMUS TECHNOLOGY INC.
CA	Published	2,926,654	Oct 8, 2014			SPLIT FEED ADDITION TO ISO-PRESSURE OPEN REFRIGERATION LPG RECOVERY	LUMMUS TECHNOLOGY INC.
US	Published	15/027,648	Apr 6, 2016			SPLIT FEED ADDITION TO ISO-PRESSURE OPEN REFRIGERATION LPG RECOVERY	LUMMUS TECHNOLOGY INC.
CA	Issued	2,978,752	Mar 4, 2016	2978752	Nov 12, 2019	CONNECTION FOR REFRIGERATED GAS STORAGE TANK	Chicago Bridge & Iron Company (IL)
US	Issued	15/061,289	Mar 4, 2016	9,835,291	Dec 5, 2017	Connection for refrigerated gas storage tank	Chicago Bridge & Iron Company (IL)
US	Published	15/800,956	Nov 1, 2017			CONNECTION FOR REFRIGERATED GAS STORAGE TANK	Chicago Bridge & Iron Company (IL)
US	Issued	14/550,384	Nov 21, 2014	9,695,369	Jul 4, 2017	PROCESS TO UPGRADE PARTIALLY CONVERTED VACUUM RESIDUA	LUMMUS TECHNOLOGY INC.
US	Issued	15/407,917	Jan 17, 2017	10,344,225	Jul 9, 2019	PROCESS TO UPGRADE PARTIALLY CONVERTED VACUUM RESIDUA	LUMMUS TECHNOLOGY INC.
US	Issued	14/874,755	Oct 5, 2015	10,017,702	Jul 10, 2018	Thermal cracking of crudes and heavy feeds to produce olefins in pyrolysis reactor	LUMMUS TECHNOLOGY INC.
US	Issued	16/028,980	Jul 6, 2018	10,208,257	Feb 19, 2019	THERMAL CRACKING OF CRUDES AND HEAVY FEEDS TO PRODUCE OLEFINS IN PYROLYSIS REACTORS	LUMMUS TECHNOLOGY INC.
CA	Published	2,942,675	Mar 13, 2015			PROCESS AND APPARATUS FOR HEAVY HYDROCARBON REMOVAL FROM LEAN NATURAL GAS BEFORE LIQUEFACTION	LUMMUS TECHNOLOGY INC.

US	Published	15/127,304	Mar 13, 2015			PROCESS AND APPARATUS FOR HEAVY HYDROCARBON REMOVAL FROM LEAN NATURAL GAS BEFORE LIQUEFACTION	LUMMUS TECHNOLOGY INC.
CA	Issued	2,963,972	Oct 27, 2015	2963972	Aug 20, 2019	PROCESS TO UPGRADE PARTIALLY CONVERTED VACUUM RESIDUA.	LUMMUS TECHNOLOGY INC.
US	Pending	15/522,342	Apr 27, 2017			PROCESS TO UPGRADE PARTIALLY CONVERTED VACUUM RESIDUA	LUMMUS TECHNOLOGY INC.
US	Pending	16/428,582	May 31, 2019			HELICALLY BAFFLED HEAT EXCHANGER	LUMMUS TECHNOLOGY INC.
US	Issued	15/706,266	Sep 15, 2017	10,450,241	Oct 22, 2019	INTEGRATED PROPANE DEHYDROGENATION PROCESS	LUMMUS TECHNOLOGY INC.
US	Published	15/266,398	Sep 15, 2016			ETHANE RECOVERY PROCESS AND ALKYLATION PROCESS WITH ETHANE RECOVERY	LUMMUS TECHNOLOGY INC.
US	Issued	15/266,430	Sep 15, 2016	10,365,038	Jul 30, 2019	PROCESS FOR THE PRODUCTION OF DILUTE ETHYLENE	LUMMUS TECHNOLOGY INC.
US	Allowed	16/525,079	Jul 29, 2019			PROCESS FOR THE PRODUCTION OF DILUTE ETHYLENE	LUMMUS TECHNOLOGY INC.
CA	Published	3,036,996	Sep 14, 2017			FLUID CATALYTIC CRACKING PROCESS AND APPARATUS FOR MAXIMIZING LIGHT OLEFIN YIELD AND OTHER APPLICATIONS	LUMMUS TECHNOLOGY INC.
US	Issued	15/706,348	Sep 15, 2017	10,351,786	Jul 16, 2019	Fluid catalytic cracking process and apparatus for maximizing light olefin yield and other applications	LUMMUS TECHNOLOGY INC.
US	Pending	16/511,355	Jul 15, 2019			FLUID CATALYTIC CRACKING PROCESS AND APPARATUS FOR MAXIMIZING LIGHT OLEFIN YIELD AND OTHER APPLICATIONS	LUMMUS TECHNOLOGY INC.
US	Pending	16/511,425	Jul 15, 2019			FLUID CATALYTIC CRACKING PROCESS AND APPARATUS FOR MAXIMIZING LIGHT OLEFIN YIELD AND OTHER APPLICATIONS	LUMMUS TECHNOLOGY INC.
US	Pending	16/511,645	Jul 15, 2019			FLUID CATALYTIC CRACKING PROCESS AND APPARATUS FOR MAXIMIZING LIGHT OLEFIN YIELD AND OTHER APPLICATIONS	LUMMUS TECHNOLOGY INC.
CA	Published	3,036,971	Sep 15, 2017			PROCESS AND APPARATUS FOR ENHANCED REMOVAL OF CONTAMINANTS IN FLUID CATALYTIC CRACKING PROCESSES	LUMMUS TECHNOLOGY INC.

US	Issued	15/705,769	Sep 15, 2017	10,450,514	Oct 22, 2019	Process and apparatus for enhanced removal of contaminants in fluid catalytic cracking processes	LUMMUS TECHNOLOGY INC.
US	Pending	16/559,016	Sep 3, 2019			PROCESS AND APPARATUS FOR ENHANCED REMOVAL OF CONTAMINANTS IN A FLUID CATALYTIC CRACKING PROCESSES	LUMMUS TECHNOLOGY INC.
CA	Pending	Formal Report Pending	Dec 21, 2017			MULTI-STAGE RESID HYDROCRACKING	LUMMUS TECHNOLOGY INC.
US	Published	15/850,893	Dec 21, 2017			MULTI-STAGE RESID HYDROCRACKING	LUMMUS TECHNOLOGY INC.
CA	Published	3,016,593	Mar 2, 2017			TWO-STAGE GASIFIER AND GASIFICATION PROCESS WITH FEEDSTOCK FLEXIBILITY	LUMMUS TECHNOLOGY INC.
US	Issued	15/449,216	Mar 3, 2017	10,093,876	Oct 9, 2018	TWO-STAGE GASIFIER AND GASIFICATION PROCESS WITH FEEDSTOCK FLEXIBILITY	LUMMUS TECHNOLOGY INC.
US	Published	16/154,420	Oct 8, 2018			TWO-STAGE GASIFIER AND GASIFICATION PROCESS WITH FEEDSTOCK FLEXIBILITY	LUMMUS TECHNOLOGY INC.
CA	Published	3,030,887	Jul 19, 2017			FEED EFFLUENT HEAT EXCHANGER	LUMMUS TECHNOLOGY INC.
US	Allowed	15/654,527	Jul 19, 2017			FEED EFFLUENT HEAT EXCHANGER	LUMMUS TECHNOLOGY INC.
US	Pending	15/704,851	Sep 14, 2017			DIGITAL PLATFORM FOR LIFE OF PLANT SERVICES	J. Ray McDermott S.A.
CA	Pending	3,035,873	Apr 6, 2017			PRETREATMENT OF NATURAL GAS PRIOR TO LIQUEFACTION	LUMMUS TECHNOLOGY INC.
US	Published	15/257,100	Sep 6, 2016			PRETREATMENT OF NATURAL GAS PRIOR TO LIQUEFACTION	LUMMUS TECHNOLOGY INC.
US	Issued	15/010,173	Jan 29, 2016	10,035,125	Jul 31, 2018	PRODUCING C5 OLEFINS FROM STEAM CRACKER C5 FEEDS	LUMMUS TECHNOLOGY INC.
US	Issued	15/901,261	Feb 21, 2018	10,252,240	Apr 9, 2019	PRODUCING C5 OLEFINS FROM STEAM CRACKER C5 FEEDS	LUMMUS TECHNOLOGY INC.
US	Issued	15/901,415	Feb 21, 2018	10,252,240	Apr 9, 2019	PRODUCING C5 OLEFINS FROM STEAM CRACKER C5 FEEDS	LUMMUS TECHNOLOGY INC.
US	Pending	16/379,414	Apr 9, 2019			PRODUCING C5 OLEFINS FROM STEAM CRACKER C5 FEEDS	LUMMUS TECHNOLOGY INC.
US	Pending	62/932,744	Nov 8, 2019			RECOVERY OF PROPYL SULFATE FROM PROPYLENE ALKYLATION	LUMMUS TECHNOLOGY LLC
CA	Pending	3/038,386	Mar 29, 2019			METHOD AND APPARATUS FOR ANAEROBIC SLUDGE DIGESTION MIXING AND HEAT EXCHANGE	Chicago Bridge & Iron Company (IL)

US	Pending	62/653,839	Apr 6, 2018			METHOD AND APPARATUS FOR ANAEROBIC SLUDGE DIGESTION MIXING AND HEAT EXCHANGE	Chicago Bridge & Iron Company (IL)
US	Pending	16/376,651	Apr 5, 2019			METHOD AND APPARATUS FOR ANAEROBIC SLUDGE DIGESTION MIXING AND HEAT EXCHANGE	Chicago Bridge & Iron Company (IL)
US	Allowed	16/381,432	Apr 11, 2019	10,537,826	Jan 21, 2020	STRUCTURED PACKING FOR CATALYTIC DISTILLATION	LUMMUS TECHNOLOGY LLC
US	Pending	16/235,824	Dec 28, 2018			CONVERSION OF HEAVY FUEL OIL TO CHEMICALS	LUMMUS TECHNOLOGY LLC
US	Published	16/039,167	Jul 18, 2018			INTEGRATED PYROLYSIS AND HYDROCRACKING UNITS FOR CRUDE OIL TO CHEMICALS	LUMMUS TECHNOLOGY LLC
US	Published	16/039,193	Jul 18, 2018			INTEGRATED THERMAL CRACKING AND DEHYDROGENATION PROCESS FOR OLEFIN PRODUCTION	LUMMUS TECHNOLOGY LLC
US	Published	16/039,205	Jul 18, 2018			INTEGRATED THERMAL AND CATALYTIC CRACKING FOR OLEFIN PRODUCTION	LUMMUS TECHNOLOGY LLC
CA	Pending	3,053,477	Feb 28, 2018			Offshore Ship to Ship	J. Ray McDermott S.A.
US	Pending	15/908,479	Feb 28, 2018			OFFSHORE SHIP-TO-SHIP LIFTING WITH TARGET TRACKING ASSISTANCE	J. Ray McDermott S.A.
US	Published	15/988,567	May 24, 2018			HVDC MODULAR PLATFORM DESIGN	J. Ray McDermott S.A.
US	Pending	62/738,639	Sep 28, 2018			PIPE SUPPORT SYSTEM WITH MULTIPLE CLAMPS	J. Ray McDermott S.A.
US	Pending	62/564,054	Sep 27, 2017			HOC Clamping Arrangement For Top Tensions on a rolling and pitching vessel	J. Ray McDermott S.A.
US	Pending	16/401,595	May 2, 2019			REVERSE ACID AND HYDROCARBON CASCADING IN ALKYLATION	LUMMUS TECHNOLOGY LLC
US	Pending	16/351,972	Mar 13, 2019			IN SITU COKING OF HEAVY PITCH AND OTHER FEEDSTOCKS WITH HIGH FOULING TENDENCY	LUMMUS TECHNOLOGY LLC
US	Pending	16/358,932	Mar 20, 2019			HEAT EXCHANGER CLOSURE ASSEMBLIES AND METHODS OF USING AND INSTALLING THE SAME	LUMMUS TECHNOLOGY INC.
US	Pending	62/646,141	Mar 21, 2018			PLASTIC LINED PIPE REELABLE CONNECTOR	J. Ray McDermott S.A.
US	Pending	16/549,804	Aug 23, 2019			PROCESS FOR THE PRODUCTION OF HIGH PURITY ISOBUTYLENE	LUMMUS TECHNOLOGY LLC

US	Pending	62/828,836	Apr 3, 2019			STAGED FLUID CATALYTIC CRACKING PROCESSES INCORPORATING A SOLIDS SEPARATION DEVICE FOR UPGRADING NAPHTHA RANGE MATERIAL	LUMMUS TECHNOLOGY LLC
US	Pending	62/852,744	May 24, 2019			FLEXIBLE PRODUCTION OF GASOLINE AND JET FUEL IN ALKYLATION REACTOR	LUMMUS TECHNOLOGY LLC
US	Pending	62/830,122	Apr 5, 2019			A PROCESS FOR CONVERSION OF CRUDES AND CONDENSATES TO CHEMICALS UTILIZING A MIX OF HYDROGEN ADDITION AND CARBON REJECTION	LUMMUS TECHNOLOGY LLC
US	Pending	62/938,002	Nov 20, 2019			ETHYLENE MAXIMIZATION WITH PROPYLENE METHATHESIS	LUMMUS TECHNOLOGY LLC
US	Pending	62/937,992	Nov 20, 2019			PROCESS SCHEME FOR INCREASED PRODUCTION OF ETHYLENE FROM PROPYLENE METATHESIS	LUMMUS TECHNOLOGY LLC
US	Pending	62/801,305	Feb 5, 2019			SYSTEM AND METHODS FOR DETERMINING RELATIVE POSITION AND MOTION	J. Ray McDermott S.A.
US	Pending	62/830,228	Apr 5, 2019			SYSTEM AND METHODS FOR DETERMINING RELATIVE POSITION AND MOTION	J. Ray McDermott S.A.
US	Pending	62/814,469	Mar 6, 2019			SHROUD FOR SUBSEA FLANGE CONNECTION PROTECTION	J. Ray McDermott S.A.
US	Pending	62/867,558	Jun 27, 2019			SHROUD FOR SUBSEA FLANGE PROTECTION	J. Ray McDermott S.A.
US	Pending	62/843,008	May 3, 2019			AUTOMATIC MANAGEMENT OF HYDROCARBON FACILITIES USING MACHINE LEARNING	J. Ray McDermott S.A.
US	Pending	29/704,539	Sep 5, 2019			PROTECTIVE SLEEVE NUT FOR BOLTED CONNECTION OF TWO MATING COMPONENTS	J. Ray McDermott S.A.
US	Pending	62/896,278	Sep 5, 2019			PROTECTIVE SLEEVE NUT FOR BOLTED CONNECTION OF TWO MATING COMPONENTS	J. Ray McDermott S.A.
US	Pending	62/923,092	Oct 18, 2019			A STINGER FOR A PIPE LAYING OPERATION	J. Ray McDermott S.A.
US	Pending	62/933,862	Nov 11, 2019			DISRUPTIVE COUPLING SYSTEMS AND METHODS FOR SUBSEA SYSTEMS	J. Ray McDermott S.A.

[illegible]

EXHIBIT C TO SCHEDULE 4.9

TRADEMARKS

(See Attached.)

Mark	Country	Appl No	Filing Date	Status	Owner of Record at Government TM Office	All Goods Services
GEMINIXD	CANADA	1912487	07/31/2018	PENDING	McDermott, Inc	09 - Software for monitoring, tracking, analyzing, and integrating aspects of production facilities, including onshore and offshore platforms, refineries and vessels; Software for tracking equipment location, maintenance history, inspection records, and parts inventory; Software for developing preventative maintenance schedules; Software for generating or interacting with two-dimensional, three-dimensional, and virtual reality models of a production facility 42 - Software as a service (SaaS) featuring software for use by others for monitoring, tracking, analyzing, and integrating aspects of production facilities, including onshore and offshore platforms, refineries and vessels; Software as a service (SaaS) featuring software
GEMINIXD	UNITED STATES	877778.488	01/31/2018	ALLOWED	McDermott, Inc	09 - Software for monitoring, tracking, analyzing, and integrating aspects of production facilities, including offshore platforms, and vessels; Software for tracking equipment location, maintenance history, inspection records, and parts inventory; Software for identifying preventative maintenance schedules; Software for generating or interacting with two-dimensional, three-dimensional, and virtual reality models of a production facility 42 - Software as a service (SaaS) featuring software for use by others for monitoring, tracking, analyzing, and integrating aspects of production facilities, including offshore platforms, and vessels; Software as a service (SaaS) featuring software for use by others for tracking production facility or vessel equipment location, maintenance history, inspection
GEMINIXD (Stylized)	UNITED STATES	877781.672	02/02/2018	ALLOWED	McDermott, Inc	09 - Software for monitoring, tracking, analyzing, and integrating aspects of production facilities, including offshore platforms, and vessels; Software for tracking equipment location, maintenance history, inspection records, and parts inventory; Software for identifying preventative maintenance schedules; Software for generating or interacting with two-dimensional, three-dimensional, and virtual reality models of a production facility 42 - Software as a service (SaaS) featuring software for use by others for monitoring, tracking, analyzing, and integrating aspects of production facilities, including offshore platforms, and vessels; Software as a service (SaaS) featuring software for use by others for tracking production facility or vessel equipment location, maintenance history, inspection
M & Design with blue background	UNITED STATES	87909.880	05/07/2018	ALLOWED	McDermott, Inc	06 - Transportable, modular and prefabricated buildings of metal; structures of metal; namely, modular, portable, prefabricated and floating structures of metal for the oil and gas industry; floating docks of metal; metal portions and structural supports thereof; buoyancy metal cans used to support decking and floating structures; anchors; metal storage tanks; general purpose metal storage containers; large steel plate structures for the storage, transportation and processing of liquids and gases; metal pillars for buildings; and metal reinforcement materials for building; framework of metal for building; prefabricated platforms of metal; floating docks of metal; for mooring boats; steel tubes and steel pipes; manifolds and termination assemblies; branching tubes; rigid and flexible flow lines, risers, and tie-in spools; all of metal for use with pipelines; steel molding plates; reinforcing materials of metal for pipes; metal storage tanks; metal fluid storage tanks; buoyant gas storage tanks of metal; metal tanks for storage featuring a floating roof; metal evaporation tanks for changing liquid into vapors; fittings of metal for building; namely, internal floating lids of metal for use with gas or buoyant gas storage tanks; building materials of metal; building panels of metal; steel plate; fittings of metal for building; mooring bollards of metal; prefabricated components of metal for building; clips of metal for cables and pipes; common metals, unwrought or semi-wrought, process equipment and materials for the exploration, production, refining, storage, transport, distribution and processing of natural resources, liquids, and gases; namely, metal pipes for liquid and gas transfer; metal pipe fittings; metal penstocks; pipes and conduits; containers of metal for liquid fuel; metal storage tanks; metal cylinders for compressed gas or liquids; solid empty, mesh wire with a reinforcement component; expanded metal intertwined with a reinforcement component; metal distillation columns; column packing for reactive distillation columns being catalytic metals or mixtures thereof for producing hydrocarbons and hydrocarbon based products; water settling tanks of metal 07 - Refining and petrochemical machinery and equipment; namely, industrial chemical reactors; reactor internals being parts for industrial chemical reactors; injectors being parts for industrial chemical reactors; industrial petrochemical refining reactors; industrial refining reactor components; namely, refining reactor vessels and refining reactor vessel subsystems; distillation and petrochemical plants machinery in the chemical, petrochemical, petroleum and oil industries; refineries being petrochemical refining machinery, apparatus and installations for the distillation and refining of petroleum being oil, natural gas and petrochemical refining machinery, apparatus and installations for the production of 08 - Transportable, modular and prefabricated buildings of metal; structures of metal; namely, modular, portable, prefabricated and floating structures of metal for the oil and gas industry; floating docks of metal; metal portions and structural supports thereof; buoyancy metal cans used to support decking and floating structures; anchors; metal storage tanks; general purpose metal storage containers; large steel plate structures for the storage, transportation and processing of liquids and gases; metal pillars for buildings; and metal reinforcement materials for building; framework of metal for building; prefabricated platforms of metal; floating docks of metal; for mooring boats; steel tubes and steel pipes; manifolds and termination assemblies; branching tubes; rigid and flexible flow lines, risers, and tie-in spools; all of metal for use with pipelines; steel molding plates; reinforcing materials of metal for pipes; metal storage tanks; metal fluid storage tanks; liquefied gas storage tanks of metal; metal tanks for storage featuring a floating roof; metal evaporation tanks for changing liquid into vapors; fittings of metal for building; namely, internal floating lids of metal for use with gas or liquefied gas storage tanks; building materials of metal; building panels of metal; steel plate; fittings of metal for building; mooring bollards of metal; prefabricated components of metal for building; clips of metal for cables and pipes; common metals, unwrought or semi-wrought, process equipment and materials for the exploration, production, refining, storage, transport, distribution and processing of natural resources, liquids, and gases; namely, metal pipes for liquid and gas transfer; metal pipe fittings; metal penstocks; pipes and conduits; containers of metal for liquid fuel; metal storage tanks; metal cylinders for compressed gas or liquids; solid empty, mesh wire with a reinforcement component; expanded metal intertwined with a reinforcement component; metal distillation columns; column packing for reactive distillation columns being catalytic metals or mixtures thereof for producing hydrocarbons and hydrocarbon based products; water settling tanks of metal 07 - Refining and petrochemical machinery and equipment; namely, industrial chemical reactors; reactor internals being parts for industrial chemical reactors; injectors being parts for industrial chemical reactors; industrial petrochemical refining reactors; industrial refining reactor components; namely, refining reactor vessels and refining reactor vessel subsystems; distillation and petrochemical plants machinery in the chemical, petrochemical, petroleum and oil industries; refineries being petrochemical refining machinery, apparatus and installations for the distillation and refining of petroleum being oil, natural gas and
M & Design with white background	UNITED STATES	87909.883	05/07/2018	ALLOWED	McDermott, Inc	06 - Transportable, modular and prefabricated buildings of metal; structures of metal; namely, modular, portable, prefabricated and floating structures of metal for the oil and gas industry; floating docks of metal; metal portions and structural supports thereof; buoyancy metal cans used to support decking and floating structures; anchors; metal storage tanks; general purpose metal storage containers; large steel plate structures for the storage, transportation and processing of liquids and gases; metal pillars for buildings; and metal reinforcement materials for building; framework of metal for building; prefabricated platforms of metal; floating docks of metal; for mooring boats; steel tubes and steel pipes; manifolds and termination assemblies; branching tubes; rigid and flexible flow lines, risers, and tie-in spools; all of metal for use with pipelines; steel molding plates; reinforcing materials of metal for pipes; metal storage tanks; metal fluid storage tanks; liquefied gas storage tanks of metal; metal tanks for storage featuring a floating roof; metal evaporation tanks for changing liquid into vapors; fittings of metal for building; namely, internal floating lids of metal for use with gas or liquefied gas storage tanks; building materials of metal; building panels of metal; steel plate; fittings of metal for building; mooring bollards of metal; prefabricated components of metal for building; clips of metal for cables and pipes; common metals, unwrought or semi-wrought, process equipment and materials for the exploration, production, refining, storage, transport, distribution and processing of natural resources, liquids, and gases; namely, metal pipes for liquid and gas transfer; metal pipe fittings; metal penstocks; pipes and conduits; containers of metal for liquid fuel; metal storage tanks; metal cylinders for compressed gas or liquids; solid empty, mesh wire with a reinforcement component; expanded metal intertwined with a reinforcement component; metal distillation columns; column packing for reactive distillation columns being catalytic metals or mixtures thereof for producing hydrocarbons and hydrocarbon based products; water settling tanks of metal 07 - Refining and petrochemical machinery and equipment; namely, industrial chemical reactors; reactor internals being parts for industrial chemical reactors; injectors being parts for industrial chemical reactors; industrial petrochemical refining reactors; industrial refining reactor components; namely, refining reactor vessels and refining reactor vessel subsystems; distillation and petrochemical plants machinery in the chemical, petrochemical, petroleum and oil industries; refineries being petrochemical refining machinery, apparatus and installations for the distillation and refining of petroleum being oil, natural gas and

M and Design CANADA 1029281 11/07/2018 PENDING McDermott, Inc

06 - Transportable, modular and prefabricated buildings of metal, structures of metal, namely, modular, portable, prefabricated and floating structures of metal for the oil and gas industry, floating docks of metal, metal portions and structural supports therefor, buoyancy metal cans used to support docking and floating structures, anchors, metal storage tanks, general purpose metal storage containers, large steel plate structures for the storage, transportation and processing of liquids and gases, metal pillars for buildings, and metal reinforcement materials for building, framework of metal for building, prefabricated platforms of metal, floating docks of metal, for mooring boats; steel tubes and steel pipes, manifolds and termination assemblies, branching tubes, rigid and flexible flow lines, risers, and tie-in spools, all of metal for use with pipelines, steel molding plate, reinforcing materials of metal for pipes, metal storage tanks, metal fluid storage tanks, liquefied gas storage tanks of metal, metal tanks for storage featuring a floating roof, metal evaporation tanks for changing liquid into vapors, fittings of metal for building, namely, internal floating lids of metal for use with gas or liquefied gas storage tanks, building materials of metal, building panels of metal, steel plate, fittings of metal for building, mooring bollards of metal, prefabricated components of metal for building, clips of metal for cables and pipes, common metals, unwrought or semi-wrought, process equipment and internals for the exploration, production, refining, storage, transport, distribution and processing of natural resources, liquids, and gases, namely, metal pipes for liquid and gas transfer, metal pipe fittings, metal penstocks, pipes and conduits, containers of metal for liquid fuel, metal storage tanks, metal cylinders for compressed gas or liquids, solid empty, mesh wire with a multifilament component, expanded metal intertwined with a multifilament component, metal distillation columns, column packing for reactive distillation columns being catalytic metals or mixtures thereof for producing hydrocarbons and hydrocarbon based products, water settling tanks of metal.

07 - Refining and petrochemical machinery and equipment, namely, industrial chemical reactors, reactor internals being parts for industrial chemical reactors, injectors being parts for industrial chemical reactors, industrial petrochemical refining reactors, industrial refining reactor components, namely, refining reactor vessels and refining reactor vessel subsystems, distillation and petrochemical plants machinery in the chemical, petrochemical, petroleum and oil industries, refineries being petrochemical refining machinery, apparatus and installations for the distillation and refining of petroleum, namely, crude oil and gas. 08 - Transportable, modular and prefabricated buildings of metal, structures of metal, namely, modular, portable, prefabricated and floating structures of metal for the oil and gas industry, floating docks of metal, metal portions and structural supports therefor, buoyancy metal cans used to support docking and floating structures, anchors, metal storage tanks, general purpose metal storage containers, large steel plate structures for the storage, transportation and processing of liquids and gases, metal pillars for buildings, and metal reinforcement materials for building, framework of metal for building, prefabricated platforms of metal, floating docks of metal, for mooring boats; steel tubes and steel pipes, manifolds and termination assemblies, branching tubes, rigid and flexible flow lines, risers, and tie-in spools, all of metal for use with pipelines, steel molding plate, reinforcing materials of metal for pipes, metal storage tanks, metal fluid storage tanks, liquefied gas storage tanks of metal, metal tanks for storage featuring a floating roof, metal evaporation tanks for changing liquid into vapors, fittings of metal for building, namely, internal floating lids of metal for use with gas or liquefied gas storage tanks, building materials of metal, building panels of metal, steel plate, fittings of metal for building, mooring bollards of metal, prefabricated components of metal for building, clips of metal for cables and pipes, common metals, unwrought or semi-wrought, process equipment and internals for the exploration, production, refining, storage, transport, distribution and processing of natural resources, liquids, and gases, namely, metal pipes for liquid and gas transfer, metal pipe fittings, metal penstocks, pipes and conduits, containers of metal for liquid fuel, metal storage tanks, metal cylinders for compressed gas or liquids, solid empty, mesh wire with a multifilament component, expanded metal intertwined with a multifilament component, metal distillation columns, column packing for reactive distillation columns being catalytic metals or mixtures thereof for producing hydrocarbons and hydrocarbon based products, water settling tanks of metal.

07 - Refining and petrochemical machinery and equipment, namely, industrial chemical reactors, reactor internals being parts for industrial chemical reactors, injectors being parts for industrial chemical reactors, industrial petrochemical refining reactors, industrial refining reactor components, namely, refining reactor vessels and refining reactor vessel subsystems, distillation and petrochemical plants machinery in the chemical, petrochemical, petroleum and oil industries, refineries being petrochemical refining machinery, apparatus and installations for the distillation and refining of petroleum, namely, crude oil and gas. 08 - Transportable, modular and prefabricated buildings of metal, structures of metal, namely, modular, portable, prefabricated and floating structures of metal for the oil and gas industry, floating docks of metal, metal portions and structural supports therefor, buoyancy metal cans used to support docking and floating structures, anchors, metal storage tanks, general purpose metal storage containers, large steel plate structures for the storage, transportation and processing of liquids and gases, metal pillars for buildings, and metal reinforcement materials for building, framework of metal for building, prefabricated platforms of metal, floating docks of metal, for mooring boats; steel tubes and steel pipes, manifolds and termination assemblies, branching tubes, rigid and flexible flow lines, risers, and tie-in spools, all of metal for use with pipelines, steel molding plate, reinforcing materials of metal for pipes, metal storage tanks, metal fluid storage tanks, liquefied gas storage tanks of metal, metal tanks for storage featuring a floating roof, metal evaporation tanks for changing liquid into vapors, fittings of metal for building, namely, internal floating lids of metal for use with gas or liquefied gas storage tanks, building materials of metal, building panels of metal, steel plate, fittings of metal for building, mooring bollards of metal, prefabricated components of metal for building, clips of metal for cables and pipes, common metals, unwrought or semi-wrought, process equipment and internals for the exploration, production, refining, storage, transport, distribution and processing of natural resources, liquids, and gases, namely, metal pipes for liquid and gas transfer, metal pipe fittings, metal penstocks, pipes and conduits, containers of metal for liquid fuel, metal storage tanks, metal cylinders for compressed gas or liquids, solid empty, mesh wire with a multifilament component, expanded metal intertwined with a multifilament component, metal distillation columns, column packing for reactive distillation columns being catalytic metals or mixtures thereof for producing hydrocarbons and hydrocarbon based products, water settling tanks of metal.

07 - Refining and petrochemical machinery and equipment, namely, industrial chemical reactors, reactor internals being parts for industrial chemical reactors, injectors being parts for industrial chemical reactors, industrial petrochemical refining reactors, industrial refining reactor components, namely, refining reactor vessels and refining reactor vessel subsystems, distillation and petrochemical plants machinery in the chemical, petrochemical, petroleum and oil industries, refineries being petrochemical refining machinery, apparatus and installations for the distillation and refining of petroleum, namely, crude oil and gas. 08 - Transportable, modular and prefabricated buildings of metal, structures of metal, namely, modular, portable, prefabricated and floating structures of metal for the oil and gas industry, floating docks of metal, metal portions and structural supports therefor, buoyancy metal cans used to support docking and floating structures, anchors, metal storage tanks, general purpose metal storage containers, large steel plate structures for the storage, transportation and processing of liquids and gases, metal pillars for buildings, and metal reinforcement materials for building, framework of metal for building, prefabricated platforms of metal, floating docks of metal, for mooring boats; steel tubes and steel pipes, manifolds and termination assemblies, branching tubes, rigid and flexible flow lines, risers, and tie-in spools, all of metal for use with pipelines, steel molding plate, reinforcing materials of metal for pipes, metal storage tanks, metal fluid storage tanks, liquefied gas storage tanks of metal, metal tanks for storage featuring a floating roof, metal evaporation tanks for changing liquid into vapors, fittings of metal for building, namely, internal floating lids of metal for use with gas or liquefied gas storage tanks, building materials of metal, building panels of metal, steel plate, fittings of metal for building, mooring bollards of metal, prefabricated components of metal for building, clips of metal for cables and pipes, common metals, unwrought or semi-wrought, process equipment and internals for the exploration, production, refining, storage, transport, distribution and processing of natural resources, liquids, and gases, namely, metal pipes for liquid and gas transfer, metal pipe fittings, metal penstocks, pipes and conduits, containers of metal for liquid fuel, metal storage tanks, metal cylinders for compressed gas or liquids, solid empty, mesh wire with a multifilament component, expanded metal intertwined with a multifilament component, metal distillation columns, column packing for reactive distillation columns being catalytic metals or mixtures thereof for producing hydrocarbons and hydrocarbon based products, water settling tanks of metal.

07 - Refining and petrochemical machinery and equipment, namely, industrial chemical reactors, reactor internals being parts for industrial chemical reactors, injectors being parts for industrial chemical reactors, industrial petrochemical refining reactors, industrial refining reactor components, namely, refining reactor vessels and refining reactor vessel subsystems, distillation and petrochemical plants machinery in the chemical, petrochemical, petroleum and oil industries, refineries being petrochemical refining machinery, apparatus and installations for the distillation and refining of petroleum, namely, crude oil and gas.

M and Design UNITED STATES 07/909,678 05/07/2018 ALLOWED McDermott, Inc

McDERMOTT & Design (Greyscale) CANADA 1029280 11/07/2018 PENDING McDermott, Inc

McDERMOTT & Design (Greyscale) UNITED STATES 07/909,674 05/07/2018 ALLOWED McDermott, Inc

MCDERMOTT (WORD	United States	72/225,045		REGISTERED	McDermott, Inc.	
MCDERMOTT (WORD	United States	72/225,047		REGISTERED	McDermott, Inc.	
MCDERMOTT (WORD	United States	72/225,048		REGISTERED	McDermott, Inc.	
MCDERMOTT (WORD	United States	72/225,048		REGISTERED	McDermott, Inc.	
MCDERMOTT (WORD	Canada	530033		REGISTERED	McDermott, Inc.	
MCDERMOTT M INC	United States	72/221,380		REGISTERED	McDermott International, Inc.	
MCDERMOTT M INC	United States	72/221,391		REGISTERED	McDermott International, Inc.	
MCDERMOTT M INC	United States	72/221,392		REGISTERED	McDermott International, Inc.	
(BULLSEYE LOGO)						
MCDERMOTT M INC	United States	72/221,393		REGISTERED	McDermott International, Inc.	
(BULLSEYE LOGO)						
MCDERMOTT M INC	Canada	530034		REGISTERED	McDermott International, Inc.	
TAKING THE LEAD	United States	88/810,599		REGISTERED	McDermott, Inc.	
WITH QHSES						
CBSI	CANADA	1239426	12/02/2004	REGISTERED	Chicago Bridge & Iron Company	TM - Metal tanks, vessels, structures, flow conductors, and process equipment for the exploration, production, refining, storage, transport, distribution, and processing of natural resources, liquids and gases SM - Construction management, construction and project management services (including associated engineering and procurement support) for tanks, vessels, large steel structures, equipment and facilities for exploration, production, refining, storage, transport, distribution and processing of natural resources, liquids and gases, engineering services
CBSI	UNITED STATES	76/566,183	01/08/2002	REGISTERED	Chicago Bridge & Iron Company	37 - Construction, maintenance and repair of commercial and industrial storage and processing spheres, terminals, towers and tanks, construction management supervision.
CBSI and Design	UNITED STATES	76/565,173	10/28/2003	REGISTERED	Chicago Bridge & Iron Company	06 - Metal tanks, reservoirs, storage structures, prestocks, and metal containers, piping, and conduit used in the exploration, production, refining, storage, transport, and processing of liquids and gases 37 - Construction management and construction project management services, and maintenance and repair of tanks, vessels, large steel structures, equipment, and facilities for the exploration, production, refining, storage, transport, and processing of liquids and gases 40 - Custom construction of tanks, vessels, large steel structures, equipment and facilities for the exploration, production, refining, storage, transport, and processing of liquids and gases
CBSI and Design (Color Blue	CANADA	1239425	12/02/2004	REGISTERED	Chicago Bridge & Iron Company	42 - Engineering TM - Metal tanks, vessels, structures, flow conductors, and process equipment for the exploration, production, refining, storage, transport, distribution, and processing of natural resources, liquids and gases SM - Construction management, construction and project management services (including associated engineering and procurement support) for tanks, vessels, large steel structures, equipment and facilities for exploration, production, refining, storage, transport, distribution and processing of natural resources, liquids and gases, engineering services
CBSI and Design (Color Blue	UNITED STATES	76/566,172	10/28/2003	REGISTERED	Chicago Bridge & Iron Company	06 - Metal tanks, vessels, structures, flow conductors and process equipment for the exploration, production, refining, storage, transport and processing of liquids and gases 37 - Construction management, construction, maintenance, and repair of tanks, vessels, large steel structures, equipment and facilities for the exploration, production, refining, storage, transport, and processing of liquids and gases 42 - Engineering
CBI	UNITED STATES	78/974,099	05/02/2006	REGISTERED	Chicago Bridge & Iron Company	37 - Construction, maintenance, and repair of commercial and industrial storage and processing spheres, terminals, towers, tanks, and industrial process vessels, construction management supervision
CBI IN HEMISPHEROIDAL	CANADA	0369316	12/04/1972	REGISTERED	CHICAGO BRIDGE & IRON COMPANY	TM - Large steel plate structures for the storage, transportation, and processing of liquids and gases
CBI IN HEMISPHEROIDAL	UNITED STATES	74/537,682	08/15/1994	REGISTERED	Chicago Bridge & Iron Company	37 - Construction maintenance repair, engineering and project management services
CLARICONE	UNITED STATES	78/546,267	01/11/2005	REGISTERED	Chicago Bridge & Iron Company	11 - Water purification tanks
HORTONSPHERE	UNITED STATES	71/168,114	06/05/1924	REGISTERED	Chicago Bridge & Iron Company	06 - Storage tanks
HORTONSPHEROID	UNITED STATES	71/534,996	09/16/1947	REGISTERED	Chicago Bridge & Iron Company	06 - Liquid storage tanks
HYDROPILLAR	UNITED STATES	78/545,303	01/11/2005	REGISTERED	Chicago Bridge & Iron Company	06 - Metal fluid storage tanks
PC WATERSPHEROID	UNITED STATES	78/068,078	06/12/2000	REGISTERED	Chicago Bridge & Iron Company	06 - Water storage tanks made primarily of metal on a concrete pedestal
SOCOOL	UNITED STATES	75/788,512	08/05/1996	REGISTERED	Chicago Bridge & Iron Company	37 - Installation and maintenance of institutional air conditioning systems
STRATA-THERM	CANADA	0733126	07/10/1993	REGISTERED	CHICAGO BRIDGE & IRON TECHNICAL SERVICES COMPANY	TM - Thermal storage tanks made primarily of metal
STRATA-THERM	UNITED STATES	74/562,270	02/26/1993	REGISTERED	Chicago Bridge & Iron Company	06 - Thermal storage tanks made primarily of metal
VAPORMASTER	CANADA	487599	05/28/1982	REGISTERED	Chicago Bridge & Iron Company	TM - Elastomer strip useful primarily as a secondary seal on floating roof storage tanks
WATERSPHERE	UNITED STATES	72/008,681	04/19/1956	REGISTERED	Chicago Bridge & Iron Company	06 - Water storage tanks
WATERSPHEROID	UNITED STATES	73/084,630	07/26/1976	REGISTERED	Chicago Bridge & Iron Company	06 - Water storage tanks
WEATHERMASTER	CANADA	0282083	08/23/1985	REGISTERED	CHICAGO BRIDGE & IRON COMPANY	TM - A tank including a floating roof
WEATHERMASTER	UNITED STATES	72/181,772	01/31/1963	REGISTERED	Chicago Bridge & Iron Company	06 - Tank including a floating roof

SHAW & Triangle Design	UNITED STATES	76/291,010	07/27/2001	REGISTERED	The Shaw Group Inc	37 - Industrial construction and maintenance related to piping systems, construction services related to industrial projects which use piping systems 42 - Piping engineering services, design for others in the field of piping and pipe support systems, engineering services, namely, civil, mechanical, and electrical engineering services
Shaw Logo	UNITED STATES	76/291,008	07/27/2001	REGISTERED	The Shaw Group Inc	37 - Industrial construction and maintenance related to piping systems, construction services related to industrial projects which use piping systems 42 - Piping engineering services, design for others in the field of piping and pipe support systems, engineering services, namely, civil, mechanical, and electrical engineering services
HELIFIN	CANADA	1263211	12/15/2005	REGISTERED	Lummus Technology Inc	TM - Industrial heat exchangers
HELDXCHANGER	CANADA	1263210	12/15/2005	REGISTERED	Lummus Technology Inc	TM - Industrial heat exchangers
LC-MAX	CANADA	1540843	08/23/2011	REGISTERED	Lummus Technology Inc	37 - Processing of oils, gases, hydrocarbons, and petrochemicals, engineering services, namely, design of technology for the processing of oils, gases, hydrocarbons, and petrochemicals, technical consulting, scientific and industrial research and development, expert appraisals, evaluations, estimates, research preparation of reports, and analysis in the field of processing of oils, gases, hydrocarbons, and petrochemicals TM - Industrial refining reactor components, namely, refining reactor vessels and refining reactor vessel subsystems sold in connection with refining reactor vessels, for use in connection with processing of oils, gases, hydrocarbons, and
LUMMUS	CANADA	0210472	02/22/1991	REGISTERED	Lummus Technology Inc	TM - Chemical and petroleum distillation and refinery apparatus and power plant equipment, namely, oil heaters and parts thereof, heat exchangers, condensers, steam generators, distillation columns and parts thereof, flash evaporation tanks, and steam jet
LUMMUS	CANADA	338091	11/23/1970	REGISTERED	Lummus Technology Inc	SM - (1) Project financing assistance and counseling services for the chemical, etc. industries and power plants (2) Services in engineering, design, construction, start-up, repair, maintenance and procurement for plants, process units and associated equipment and facilities in the chemical, pharmaceutical, petrochemical, petroleum refining, metallurgical, nuclear, pulp and paper, plastics, synthetic fiber, fertilizer, food processing and coal processing industries, and for power plants (3) Analytical chemical services and services in the testing, treating and processing of metallurgical, petroleum-derived and coal-derived materials (4) Consulting engineering services, laboratory and pilot plant services, and development of and acquisition of rights in, processes for others, all in the chemical, petrochemical, petroleum refining, metallurgical, nuclear, pulp and
LUMMUS MULTLOK	CANADA	210471	02/22/1991	REGISTERED	Lummus Technology Inc	TM - Heat exchangers for oil refineries and power plants
MDOGRID	CANADA	1653404	11/23/2011	REGISTERED	Lummus Technology Inc	TM - Chemical, biochemical, and petroleum refining reactor components, namely reactor internals, all for industrial use
SRT	CANADA	335934	06/04/1970	REGISTERED	Lummus Technology Inc	TM - Industrial apparatus for rapid, high-temperature heating of fluids
ALKYPAK	UNITED STATES	77/930,180	03/08/2010	REGISTERED	Catalytic Distillation Technologies	38 - Column packing for reactive distillation columns, namely, mesh wire with a multi-filament component or expanded metal interwoven with a multi-filament component, the multi-filament selected from inert polymers, catalytic polymers, catalytic metals or mixtures thereof for producing alkylates in a sulfuric acid alkylation
ARQCAT	UNITED STATES	74/519,365	06/02/1994	REGISTERED	Catalytic Distillation Technologies	11 - Catalytic distillation structure for use in the manufacture of organic compounds for use in the chemical and petroleum industries
BENZENE CDHYDRO	UNITED STATES	77/248,303	09/06/2007	REGISTERED	Catalytic Distillation Technologies	45 - Licensing of oil refining and petrochemical technologies, consultation services in the field of the licensing of oil refining and petrochemical technology
CDALKY	UNITED STATES	76/569,660	01/12/2004	REGISTERED	Catalytic Distillation Technologies	42 - Chemical research development and consultation services for sulfuric acid alkylation processes
CDALKY	UNITED STATES	77/475,440	05/15/2008	REGISTERED	Catalytic Distillation Technologies	45 - Licensing of oil refining and petrochemical technologies, Consultation services in the field of the licensing of oil refining and petrochemical technology
CDETBE	UNITED STATES	74/299,368	07/03/1992	REGISTERED	Catalytic Distillation Technologies	42 - Chemical research development and consultation services
CDETBE	UNITED STATES	77/475,227	05/15/2008	REGISTERED	Catalytic Distillation Technologies	45 - Licensing of oil refining and petrochemical technologies, Consultation services in the field of the licensing of oil refining and petrochemical technology
CDETHEROL	UNITED STATES	74/287,345	06/22/1992	REGISTERED	Catalytic Distillation Technologies	42 - Chemical research development and consultation services
CDETHERS	UNITED STATES	74/296,374	07/03/1992	REGISTERED	Catalytic Distillation Technologies	42 - Chemical research development and consultation services
CDETHERS	UNITED STATES	77/475,262	05/16/2008	REGISTERED	Catalytic Distillation Technologies	45 - Licensing of oil refining and petrochemical technologies, Consultation services in the field of the licensing of oil refining and petrochemical technology
CDHDS	UNITED STATES	77/475,353	05/15/2008	REGISTERED	Catalytic Distillation Technologies	45 - Licensing of oil refining and petrochemical technologies, Consultation services in the field of the licensing of oil refining and petrochemical technology
CDHDS*	UNITED STATES	77/475,395	05/15/2008	REGISTERED	Catalytic Distillation Technologies	45 - Licensing of oil refining and petrochemical technologies, Consultation services in the field of the licensing of oil refining and petrochemical technology
CDHYDRO	UNITED STATES	74/664,816	06/28/1996	REGISTERED	Catalytic Distillation Technologies	42 - Chemical research development and consultation services

CDHYDRO	UNITED STATES	77/475,335	05/15/2008	REGISTERED	Catalytic Distillation Technologies	45 - Licensing of oil refining and petrochemical technologies; Consultation services in the field of the licensing of oil refining and petrochemical technology
CDIB	UNITED STATES	74/898,447	06/28/1995	REGISTERED	Catalytic Distillation Technologies	42 - Chemical research development and consultation services
CDIB	UNITED STATES	77/475,304	05/15/2008	REGISTERED	Catalytic Distillation Technologies	45 - Licensing of oil refining and petrochemical technologies; Consultation services in the field of the licensing of oil refining and petrochemical technology
CDISOM	UNITED STATES	86/908,466	02/16/2016	ALLOWED	Catalytic Distillation Technologies	45 - Licensing of oil refining and petrochemical technologies; consultation services in the field of the licensing of oil refining and petrochemical technology
CDMODULES	UNITED STATES	76/251,028	8/4/2001	REGISTERED	Catalytic Distillation Technologies	08 - Catalytic distillation structure for use in the manufacture of organic compounds for use in the chemical and petroleum industries
CDMTBE	UNITED STATES	74/287,343	06/22/1992	REGISTERED	Catalytic Distillation Technologies	42 - Chemical research development and consultation services
CDMTBE	UNITED STATES	77/475,168	05/15/2008	REGISTERED	Catalytic Distillation Technologies	45 - Licensing of oil refining and petrochemical technologies; Consultation services in the field of the licensing of oil refining and petrochemical technology
CDTAE	UNITED STATES	74/898,571	06/28/1995	REGISTERED	Catalytic Distillation Technologies	42 - Chemical research development and consultation services
CDTAME	UNITED STATES	74/287,346	06/22/1992	REGISTERED	Catalytic Distillation Technologies	42 - Chemical research development and consultation services
CDTAME	UNITED STATES	77/475,203	05/15/2008	REGISTERED	Catalytic Distillation Technologies	45 - Licensing of oil refining and petrochemical technologies; Consultation services in the field of the licensing of oil refining and petrochemical technology
CDTECH	UNITED STATES	73/816,863	08/04/1989	REGISTERED	Catalytic Distillation Technologies	42 - Chemical research development and consultation services
CDTECH	UNITED STATES	85/584,725	07/14/2010	REGISTERED	Catalytic Distillation Technologies	45 - Licensing of oil refining and petrochemical technologies; consultation services in the field of the licensing of oil refining and petrochemical technology
CDTECH (Stylized)	UNITED STATES	73/816,958	08/04/1989	REGISTERED	Catalytic Distillation Technologies	42 - Chemical research development and consultation services
CDTECH (Stylized)	UNITED STATES	85/587,818	07/15/2010	REGISTERED	Catalytic Distillation Technologies	45 - Licensing of oil refining and petrochemical technologies; consultation services in the field of the licensing of oil refining and petrochemical technology
CDTECHEB	UNITED STATES	74/898,767	06/28/1995	REGISTERED	Catalytic Distillation Technologies	42 - Chemical research development and consultation services
CR&L	UNITED STATES	73/314,859	06/15/1981	REGISTERED	Catalytic Distillation Technologies	42 - Chemical Research Development and Consultation Services
E-GAS PLUS	UNITED STATES	86/702,838	07/23/2015	ALLOWED	Lummus Technology Inc	07 - Industrial chemical reactors, injectors for chemical processing used to inject hydrogen, carbon monoxide, carbon dioxide, and water into industrial chemical reactors for the manufacture of synthetic natural gas, but not for use with internal combustion engines, boilers, incinerators, gas turbines, generators and fuel cells 42 - Consulting in the field of engineering of synthetic natural gas; Engineering services in the field of manufacturing synthetic natural gas
ETHERCAT	UNITED STATES	74/520,148	05/02/1994	REGISTERED	Catalytic Distillation Technologies	11 - Catalytic distillation structure for use in the manufacture of organic compounds for use in the chemical and petroleum industries
HDSELECT	UNITED STATES	77/475,424	5/15/2008	REGISTERED	Catalytic Distillation Technologies	45 - Licensing of oil refining and petrochemical technologies; Consultation services in the field of the licensing of oil refining and petrochemical technology
HELIFIN	UNITED STATES	76/279,504	07/06/2001	REGISTERED	Lummus Technology Inc	11 - Helically baffled heat exchangers embodying low-finned tubes for use in connection with heat transfer equipment used by the petrochemical industry
HELIXCHANGER	UNITED STATES	76/281,074	07/06/2001	REGISTERED	Lummus Technology Inc	11 - Helically baffled heat exchangers for use in connection with heat transfer equipment used by the petrochemical industry
HYDROCAT	UNITED STATES	74/820,146	05/02/1994	REGISTERED	Catalytic Distillation Technologies	11 - Catalytic distillation structure for use in the manufacture of organic compounds for use in the chemical and petroleum industries
LABLEX	UNITED STATES	77/138,553	03/21/2007	REGISTERED	Lummus Technology Inc	11 - Heat exchangers, and component parts thereof
LCMAX	UNITED STATES	85/252,113	02/23/2011	REGISTERED	Lummus Technology Inc	07 - Industrial refining reactor components, namely, refining reactor vessels and refining reactor vessel subsystems sold in connection with refining reactor vessels, for use in connection with processing of oils, gases, hydrocarbons, and petrochemicals 40 - Technical consulting in the field of processing of oils, gases, hydrocarbons, and petrochemicals, and the preparation of reports relating to the same 42 - Engineering services, namely, design of technology for the processing of oils, gases, hydrocarbons, and petrochemicals, scientific and industrial research and development in the field of processing of oils, gases, hydrocarbons, and petrochemicals, quality evaluation services for others in the field of processing of oils, gases, hydrocarbons, and petrochemicals; research and analysis in the field of processing of oils, gases, hydrocarbons, and petrochemicals, and preparing

LUMMUS	UNITED STATES	71/568,318	11/06/1948	REGISTERED	Lummus Technology Inc	11 - Chemical and petroleum distillation and refinery apparatus and power plant equipment, namely oil heaters and parts thereof, heat exchangers, condensers, steam generators
LUMMUS	UNITED STATES	72/054,080	03/16/1970	REGISTERED	Lummus Technology Inc	100 - Consulting, testing, design, engineering services, and process development in the chemical, petrochemical, petroleum refining, metallurgical, nuclear, plastic and coal processing industries 101 - Acquisition of rights in processes for others, procurement of process units and associated equipment for others, all with respect to the chemical, petrochemical, petroleum refining, metallurgical, nuclear, plastic, and coal processing industries 103 - Construction, maintenance, startup, initial operations services, and repair of process units, associated equipment and facilities in the chemical, petrochemical, petroleum refining, metallurgical, nuclear, plastic, and coal processing industries, and for power plants 106 - Analytical chemical services, and treating and processing of metallurgical
LUMMUS ADVANCED BREECH-LOCK EXCHANGER	UNITED STATES	77/136,510	03/21/2007	REGISTERED	Lummus Technology Inc	11 - Heat exchangers, and component parts thereof
MODGRID	UNITED STATES	85/473,780	11/16/2011	REGISTERED	Lummus Technology LLC	07 - Chemical, biochemical, and petroleum refining reactor components, namely, reactor internals, all for industrial use
SRT	UNITED STATES	72/263,287	03/14/1968	REGISTERED	Lummus Technology LLC	11 - Industrial apparatus for rapid, high-temperature heating of fluids
Globe Design	CANADA	TMA788299		REGISTERED	Lummus Technology Inc.	
Globe Design (color)	CANADA	TMA784661		REGISTERED	Lummus Technology Inc	
L & Globe Design	CANADA	TMA784707		REGISTERED	Lummus Technology Inc	
L & Globe Design with Lummus Technology a CB&I Company	CANADA	TMA784626		REGISTERED	Lummus Technology Inc.	

SCHEDULE 4.11
TO PLEDGE AND SECURITY AGREEMENT

COMMERCIAL TORT CLAIMS

None.

SCHEDULE 4.12
TO PLEDGE AND SECURITY AGREEMENT

EXCLUDED PLEDGED COLLATERAL

Stock Certificates. The Grantors have been unable to locate the stock certificates listed below, assuming such equity interests are certificated. Upon receipt of any such stock certificates, the Grantors will promptly forward them to the Collateral Agent. Each applicable Grantor will use commercially reasonable efforts to cause such stock certificates to be re-issued (if permitted by relevant law and such issuer's Constituent Documents), issued (if permitted by relevant law and such issuer's Constituent Documents) or to locate such stock certificates, as applicable.

<u>Grantor</u>	<u>Issuer</u>	<u>Type of Organization</u>	<u># of Shares Owned</u>	<u>Total Shares Outstanding</u>	<u>% of Interest Pledged</u>	<u>Certificate No.</u>
OFFSHORE PIPELINES INTERNATIONAL, LTD.	OFFSHORE PIPELINES NIGERIA LIMITED	Corporation	300,000	5,000,000	60%	UNKNOWN
CB&I SINGAPORE PTE. LTD	ARABIAN CBI CO. LTD.	Corporation	100	400	25%	UNKNOWN
CHICAGO BRIDGE & IRON COMPANY B.V.			300		75%	
CB&I SINGAPORE PTE. LTD	ARABIAN CBI TANK MANUFACTURING CO. LTD.	Corporation	100	400	25%	UNKNOWN
CHICAGO BRIDGE & IRON COMPANY B.V.			300		75%	
CHICAGO BRIDGE & IRON COMPANY B.V.	CB&I (NIGERIA) LIMITED	Private Limited Company	4,999,999	5,000,000	99.00002%	317009
CB&I EUROPE B.V.			1		.00002%	
CB&I POWER INTERNATIONAL, INC.	CB&I ENGINEERING (THAILAND) LTD.	Limited Company	73497	150,000	48.998%	UNKNOWN
CB&I EUROPE B.V.	CB&I ENGINEERING & CONSTRUCTION CONSULTANT (SHANGHAI) CO., LTD.	Limited Liability Company	140,000	140,000	100%	UNKNOWN
CB&I UK LIMITED	CB&I GLOBAL, LLC	LLC	100%	100	100%	3
CB&I OIL & GAS EUROPE B.V.	CB&I INDIA PRIVATE LIMITED	Private Limited Company	47,038,237	47,513,370	99.00001%	1-9
CHICAGO BRIDGE & IRON COMPANY B.V.			475,133		0.99999%	
CB&I OIL & GAS EUROPE B.V.	CB&I KOREA LIMITED	Corporation	50,000	50,000	100%	UNKNOWN
CB&I OIL & GAS EUROPE B.V.	CB&I MAURITIUS	Limited Liability Company	10	10	100%	UNKNOWN
CB&I OIL & GAS EUROPE B.V.	CB&I S.R.O.	Corporation	100,000	100,000	100%	UNKNOWN
CB&I MIDDLE EAST HOLDING, INC. (53%)	CB&I SKE&C MIDDLE EAST LTD.	Corporation	26,500	50,000	53%	N/A

<u>Grantor</u>	<u>Issuer</u>	<u>Type of Organization</u>	<u># of Shares Owned</u>	<u>Total Shares Outstanding</u>	<u>% of Interest Pledged</u>	<u>Certificate No.</u>
CHICAGO BRIDGE & IRON COMPANY B.V.	CB & I FINANCE COMPANY LIMITED	Company Limited by Shares	2	2	100%	UNKNOWN
CHICAGO BRIDGE & IRON COMPANY B.V.	CBI (MALAYSIA) SDN. BHD.	Corporation	1,121,000	1,121,000	100%	UNKNOWN
CHICAGO BRIDGE & IRON COMPANY B.V.	CBI (PHILIPPINES) INC	Corporation	1,199,994	2,000,000	60%	45, 48, 63
CHICAGO BRIDGE & IRON COMPANY B.V.	CBI (THAILAND) LIMITED	Limited Company	499,999	1,000,000	49.99%	4-6260, 12501,506,250,1,2
CHICAGO BRIDGE & IRON COMPANY B.V.	CBI ARUBA N.V.	Limited Company	100	100	100%	1
CHICAGO BRIDGE & IRON (ANTILLES) N.V.	CBI BAHAMAS LIMITED	Limited Liability Company	5,000	5,000	100%	3
CHICAGO BRIDGE & IRON COMPANY B.V. CBI BAHAMAS LIMITED	CBI COLOMBIANA S.A.	Corporation	218,430,651 11,496,350	229,927,001	95% 5%	8, 9, 10
CHICAGO BRIDGE & IRON (ANTILLES) N.V.	CBI CONSTRUCTORS (JEBEL ALI) FZE (UAE)	Free Zone Establishment with Limited Liability	1	1	100%	1
CHICAGO BRIDGE & IRON COMPANY B.V.	CBI CONSTRUCTORS S.A. (PROPRIETARY) LTD.	Proprietary Limited Company	263,000	263,000	100%	20
CHICAGO BRIDGE & IRON COMPANY B.V. CB&I EUROPE B.V.	CBI DOMINICANA SRL	Corporation	6899 1	6900	99.985% .00014493%	UNKNOWN
CBI US HOLDING COMPANY INC.	CBI HOLDCO TWO INC.	Corporation	60 – Common 580 – Series A 900 – Series B 520 – Series C 550 – Series D	60 – Common 580 – Series A 900 – Series B 520 – Series C 550 – Series D	100% 100%	UNKNOWN
CBI COMPANY LTD. CBI CARIBE LIMITED CHICAGO BRIDGE & IRON COMPANY (IL)	CBI DE NICARAGUA, S.A.	Corporation	998 1 1	1,000	99.8% .1% .1%	UNKNOWN

Schedule 4.12

<u>Grantor</u>	<u>Issuer</u>	<u>Type of Organization</u>	<u># of Shares Owned</u>	<u>Total Shares Outstanding</u>	<u>% of Interest Pledged</u>	<u>Certificate No.</u>
CHICAGO BRIDGE & IRON COMPANY B.V. CHICAGO BRIDGE & IRON (ANTILLES) N.V.	CBI PERUANA SAC	Closely held corporation	4999 1	5000	99% <1%	UNKNOWN
CHICAGO BRIDGE & IRON COMPANY B.V.	CBI PANAMA, S.A.	Corporation	1,000	1,000	100%	UNKNOWN
CB&I EUROPE B.V. CB&I POWER COMPANY B.V. CHICAGO BRIDGE & IRON COMPANY B.V.	CHICAGO BRIDGE SERVICIOS PETROLEROS S.A. (BOLIVIA)	Corporation	1 1 33	35	2.857% 2.857% 94.286%	4
CHICAGO BRIDGE & IRON COMPANY B.V.	CHICAGO BRIDGE & IRON URUGUAY S.A.	Corporation	262,500	262,500	100%	UNKNOWN
CBI COMPANY LTD.	CONSTRUCTORA C.B.I. LIMITADA	Limited Company	202,950	205,000	99%	UNKNOWN
CHICAGO BRIDGE & IRON COMPANY	CONSTRUCTORA C.B.I. LIMITADA	Limited Company	2,050	205,000	1%	UNKNOWN
ENVIRONMENTAL SOLUTIONS HOLDING LTD.	ENVIRONMENTAL SOLUTIONS (CAYMAN) LTD.	Corporation	100	100	100%	UNKNOWN
SHAW HOME LOUISIANA, LLC	ENVIRONMENTAL SOLUTIONS HOLDING LTD.	Corporation	100	100	100%	1
ENVIRONMENTAL SOLUTIONS (CAYMAN) LTD.	ENVIRONMENTAL SOLUTIONS LTD.	Corporation	100	100	100%	1
ENVIRONMENTAL SOLUTIONS LTD.	ENVIRONMENTAL SOLUTIONS OF EQUADOR S.A.	Private Limited Company	N/A	N/A	99.875%	UNCERTAIN
CB&I NEDERLAND B.V. CB&I SINGAPORE PTE. LTD.	LUMMUS ARABIA LTD. CO.	Corporation	33,250 1,750	35,000	95% 5%	UNKNOWN
LUMMUS TECHNOLOGY LLC	LUMMUS GASIFICATION TECHNOLOGY LICENSING LLC	LLC	100%	N/A	100%	1
MCDERMOTT TECHNOLOGY (2), B.V.	LUMMUS NOVOLEN TECHNOLOGY GMBH	Corporation	2,600,000	2,600,000	100%	1-7

<u>Grantor</u>	<u>Issuer</u>	<u>Type of Organization</u>	<u># of Shares Owned</u>	<u>Total Shares Outstanding</u>	<u>% of Interest Pledged</u>	<u>Certificate No.</u>
LUMMUS TECHNOLOGY LLC	LUMMUS TECHNOLOGY INTERNATIONAL LLC	LLC	100%	N/A	100%	1
LUMMUS TECHNOLOGY LLC	LUMMUS TECHNOLOGY VENTURES LLC	LLC	100%	N/A	100%	1
CHICAGO BRIDGE & IRON COMPANY B.V.	LUTECH RESOURCES CANADA LTD.	Corporation	100	100	100%	UNKNOWN
CHICAGO BRIDGE & IRON COMPANY B.V.	LUTECH RESOURCES INDIA PRIVATE LIMITED	Limited Liability Company	28,951	2,897,385	0.999211%	Unknown
CB&I OIL & GAS EUROPE B.V.			2,868,434		99.0007898%	Unknown
MCDERMOTT TECHNOLOGY (2), B.V.	OOO LUMMUS TECHNOLOGY	Corporation	1	1	100%	UNKNOWN
CHICAGO BRIDGE & IRON COMPANY B.V.	PT CHICAGO BRIDGE AND IRON	Limited Liability Company	1573	1656	95%	UNKNOWN
CB&I EUROPE B.V.			83		5%	
CB&I HOLDCO INTERNATIONAL, LLC	PT STONE & WEBSTER INDONESIA	Limited Liability Company	30	40	100%	UNKNOWN
CB&I INTERNATIONAL, INC.	SHAW ASIA COMPANY, LIMITED (THAILAND)	Joint Venture	50%	n/a	50%	UNKNOWN
CB&I GROUP INC. (F/K/A THE SHAW GROUP INC.)	SHAW BENECO, INC.	Corporation	1,000	100,000	100%	2
CB&I INTERNATIONAL, INC.	SHAW INTERNATIONAL MANAGEMENT SERVICES TWO, INC.	Corporation	1,000	1,000	100%	3, 4
CB&I INTERNATIONAL, INC.	SHAW OVERSEAS (MIDDLE EAST) LTD.	Corporation	100	100	100%	3 & 4
LUMMUS TECHNOLOGY LLC	SHAW POWER TECHNOLOGIES, INC.	Corporation	1,000	1,000	100%	UNKNOWN
SHAW TRANSMISSION & DISTRIBUTION SERVICES, INC.	SHAW TRANSMISSION & DISTRIBUTION SERVICES INTERNATIONAL, INC.	Corporation	1	1	100%	1
SHAW POWER DELIVERY SYSTEMS, INC.	SHAW TRANSMISSION & DISTRIBUTION SERVICES, INC.	Corporation	1,000	1,000	100%	UNKNOWN

Pledged Notes. The Grantors have been unable to locate the promissory notes listed below. Upon receipt of any such promissory notes, the Grantors will promptly forward them to the Collateral Agent. Each applicable Grantor will use commercially reasonable efforts to cause such promissory notes to be re-

issued (if permitted by relevant law), issued (if permitted by relevant) or to locate such promissory notes, as applicable.

<u>Grantor</u>	<u>Borrower</u>	<u>Date Issued</u>	<u>Principal Amount</u>
Chicago Bridge & Iron Company (Delaware)	CB&I Group Inc. (f/k/a The Shaw Group Inc.)	February 14, 2013	\$1,000,000,000
Chicago Bridge & Iron Company (Delaware)	CB&I Group Inc. (f/k/a The Shaw Group Inc.)	February 14, 2013	\$800,000,000

SCHEDULE 4.13
TO PLEDGE AND SECURITY AGREEMENT

DEPOSIT ACCOUNTS AND SECURITIES ACCOUNTS

Bank Account	Account Name	Bank	Currency	Country
	Lealand Finance Company B.V.	BMG-Bank Mendes Gans	USD	Netherlands
	LUTECH RESOURCES CANADA LTD	BMO-Bank of Montreal	CAD	Canada
	HORTON CBI LIMITED	BMO-Bank of Montreal	CAD	Canada
	HORTON CBI LIMITED	BMO-Bank of Montreal	USD	Canada
	CBI Services, LLC	Harris Bank	USD	United States
	Chicago Bridge & Iron Company (Delaware)	Harris Bank	USD	United States
	Lutech Project Solutions B.V.	ING Bank	EUR	Netherlands
	Lutech Projects B.V.	ING Bank	EUR	Netherlands
	CB&I Nederland B.V.	ING Bank	EUR	Netherlands
	Lummus Technology Heat Transfer B.V.	ING Bank	USD	Netherlands
	Lummus Technology Heat Transfer B.V.	ING Bank	EUR	Netherlands
	Lutech Project Solutions B.V.	ING Bank	EUR	Netherlands
	CB&I Rusland B.V.	ING Bank	EUR	Netherlands
	CBI Cojafex B.V.	ABN Amro Bank	EUR	Netherlands
	Lummus Technology B.V.	ING Bank	EUR	Netherlands
	McDermott International Inc.	BBVA Compass Bank	USD	United States
	McDermott International Inc.	Capital One NA	USD	United States
	McDermott Middle East Inc.	Wells Fargo San Francisco	USD	United States
	McDermott Inc.	Wells Fargo San Francisco	USD	United States
	J. Ray McDermott S.A.	Wells Fargo San Francisco	USD	United States
	McDermott International Inc.	Wells Fargo San Francisco	USD	United States
	McDermott Technology (US) Inc	Wells Fargo San Francisco	USD	United States
	J. Ray McDermott de Mexico S.A. C.V.	Wells Fargo San Francisco	USD	United States

**SCHEDULE 8.2
TO PLEDGE AND SECURITY AGREEMENT**

NOTICES

The notice address for each Guarantor is as follows:

757 N. Eldridge Parkway
Houston, Texas 77079-4435
Attn: Treasurer
Telecopy no: (281) 870-5027

Exhibit A
to Pledge and Security Agreement

FORM OF ACKNOWLEDGMENT AND CONSENT

The undersigned hereby acknowledges receipt of a copy of the Pledge and Security Agreement dated as of January 23, 2020 (as amended, restated, supplemented, or otherwise modified from time to time, the "Agreement"), made by the Grantors parties thereto for the benefit of Crédit Agricole Corporate and Investment Bank, as collateral agent (in such capacity and together with its successors, the "Collateral Agent"); capitalized terms used but not defined herein have the meanings given such terms therein. The undersigned agrees for the benefit of the Collateral Agent and the other Secured Parties as follows:

1. The undersigned will be bound by the terms of the Agreement applicable to issuers of Pledged Securities and will comply with such terms insofar as such terms are applicable to the undersigned.
2. The undersigned confirms the statements made in the Agreement with respect to the undersigned including, without limitation, in Section 4.7 and Schedule 4.7.
3. The undersigned will notify the Collateral Agent (or its Bailee) promptly in writing of the occurrence of any of the events described in Section 5.8 of the Agreement.
4. The undersigned acknowledges Section 6.3(c) of the Agreement and agrees that it will comply with the instructions of each Grantor as set forth therein.
5. The undersigned agrees that Section 6.7 of the Agreement shall apply to it, *mutatis mutandis*, with respect to all actions that may be required of it pursuant to Section 6.7 of the Agreement.

[NAME OF ISSUER]

By: _____

Name: _____

Title: _____

Address for Notices:

Fax: _____

Exhibit B
to Pledge and Security Agreement

FORM OF INTELLECTUAL PROPERTY SECURITY AGREEMENT

This Intellectual Property Security Agreement dated as of [_____, 202__] (as amended, supplemented or otherwise modified from time to time, the “Intellectual Property Security Agreement”) is made by each of the signatories hereto, each a debtor and debtor-in-possession under Chapter 11 of the Bankruptcy Code, (collectively, the “Grantors”) in favor of Crédit Agricole Corporate and Investment Bank (“CA CIB”), as collateral agent (in such capacity and together with its successors in such capacity, the “Collateral Agent”) for the benefit of the Secured Parties (as defined in the Credit Agreement defined below).

WHEREAS, McDermott Technology (Americas), Inc., a Delaware corporation, McDermott Technology (US), Inc., a Delaware corporation, and McDermott Technology, B.V., a private company with limited liability (*besloten vennootschap met beperkte aansprakelijkheid*) incorporated under the laws of the Netherlands, each a debtor and debtor-in-possession under Chapter 11 of the Bankruptcy Code, (each a “Borrower” and collectively the “Borrowers”) have entered into the Superpriority Senior Secured Debtor-In-Possession Credit Agreement dated as of January 23, 2020 (as amended, restated, supplemented or otherwise modified from time to time, the “Credit Agreement”) among the Borrowers, McDermott International, Inc., a Panamanian corporation and a debtor and debtor-in-possession under Chapter 11 of the Bankruptcy Code, (the “Parent”), the other Guarantors from time to time party thereto, the Lenders, the Issuers, CA CIB, as Revolving Administrative Agent (as defined in the Credit Agreement) and Barclays Bank PLC, as Term Loan Administrative Agent (as defined in the Credit Agreement);

WHEREAS, in connection with the Credit Agreement and the other Loan Documents, certain Secured Parties have entered into that certain Collateral Agency Agreement dated as of January 23, 2020 (as the same may be amended, amended and restated, supplemented or otherwise modified, renewed or replaced from time to time, the “Collateral Agency Agreement”), among the Revolving Administrative Agent, the Collateral Agent, and the Term Loan Administrative Agent, and acknowledged and agreed by the Borrowers, the Parent and the other Grantors party thereto from time to time, pursuant to which the Secured Parties appointed the Collateral Agent as their agent, for the ratable benefit of all the Secured Parties, in connection with, among other things, this Agreement. Unless otherwise defined herein, terms defined in the Credit Agreement and used herein have the meanings given to them in the Credit Agreement; and

WHEREAS, in connection with (i) the Credit Agreement and (ii) the other Loan Documents, the Parent, the Borrowers and certain of the Parent’s Subsidiaries have entered into the Pledge and Security Agreement, dated as of January 23, 2020 (as amended, restated, supplemented or otherwise modified from time to time, the “Pledge and Security Agreement”), in favor of the Collateral Agent for the benefit of the Secured Parties.

SECTION 1. Grant of Security. Each Grantor hereby grants to the Collateral Agent, for the benefit of the Secured Parties in accordance with the Collateral Agency and Intercreditor Agreement, a security interest in such Grantor's right, title and interest in and to the following property, in each case, wherever located and whether now owned or at any time hereafter acquired by such Grantor or in which such Grantor now has or at any time in the future may acquire any right, title or interest, as security for the prompt and complete payment and performance when due (whether at the stated maturity, by acceleration or otherwise) of such Grantor's Obligations:

(a) (i) all trademarks, trade names, corporate names, company names, business names, fictitious business names, trade styles, service marks, logos, designs and other source or business identifiers, and all goodwill associated therewith, now existing or hereafter adopted or acquired, all registrations and recordings thereof, and all applications in connection therewith, whether in the United States Patent and Trademark Office or in any similar office or agency of the United States, any State thereof or any other country, union of countries, or any political subdivision of any of the foregoing, or otherwise, and all common-law rights related thereto, including any of the foregoing listed in Schedule 4.9 to the Pledge and Security Agreement (as such schedule may be amended or supplemented from time to time), (ii) the right to, and to obtain, all renewals thereof, (iii) the goodwill of the business symbolized by the foregoing, (iv) other source or business identifiers, designs and general intangibles of a like nature and (v) the right to sue for past, present and future infringements or dilution of any of the foregoing or for any injury to goodwill, and all proceeds of the foregoing, including royalties, income, payments, claims, damages and proceeds of suit (collectively, the "Trademarks"), including all Trademarks listed on Schedule I hereto under the heading "Trademarks";

(b) (i) all United States patents, patents issued by any other country, union of countries or any political subdivision of any of the foregoing, and all reissues and extensions thereof, including any of the foregoing listed in Schedule 4.9 to the Pledge and Security Agreement (as such schedule may be amended or supplemented from time to time), (ii) all patent applications pending in the United States or any other country or union of countries or any political subdivision of any of the foregoing and all divisions, continuations and continuations-in-part thereof, including any of the foregoing listed in Schedule 4.9 to the Pledge and Security Agreement (as such schedule may be amended or supplemented from time to time), (iii) all rights to, and to obtain, any reissues or extensions of the foregoing and (iv) all proceeds of the foregoing, including licenses, royalties, income, payments, claims, damages and proceeds of suit (collectively, the "Patents"), including all Patents listed on Schedule I hereto under the heading "Patents";

(c) (i) all copyrights arising under the laws of the United States, any other country, or union of countries, or any political subdivision of any of the foregoing, whether registered or unregistered and whether published or unpublished (including those listed in Schedule 4.9 to the Pledge and Security Agreement (as such schedule may be amended or supplemented from time to time)), all registrations and recordings thereof, and all applications in connection therewith and rights corresponding thereto throughout the world, including all registrations, recordings and applications in the United States Copyright Office, and all mask works (as defined in 17 USC 901), (ii) the right to, and to obtain, all extensions and renewals thereof, and the right to sue for past, present and future infringements of any of the foregoing,

(iii) all proceeds of the foregoing, including license, royalties, income, payments, claims, damages, and proceeds of suit and (iv) all other rights of any kind whatsoever accruing thereunder or pertaining thereto ("Copyrights"), including all Copyrights listed on Schedule I hereto under the heading "Copyrights"; and

(d) All proceeds (as such term is defined in Section 9-102(a)(64) of the UCC as from time to time in effect in the State of New York), goodwill, products, accessions, rents and profits of any and all of the foregoing and all collateral security, Supporting Obligations and guarantees given by any Person with respect to any of the foregoing.

SECTION 2. Recordation. Each Grantor authorizes and requests that the Register of Copyrights and the Commissioner of Patents and Trademarks record this Intellectual Property Security Agreement.

SECTION 3. Execution in Counterparts. This Intellectual Property Security Agreement may be executed in any number of counterparts and by different parties in separate 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. Signature pages may be detached from multiple separate counterparts and attached to a single counterpart so that all signature pages are attached to the same document. Delivery of an executed counterpart of a signature page of this Agreement by telecopy or other electronic imaging means shall be effective as delivery of a manually executed counterpart hereof.

SECTION 4. Governing Law. **THIS INTELLECTUAL PROPERTY SECURITY AGREEMENT AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES HERETO SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK WITHOUT REGARD TO ITS CONFLICTS OF LAWS PROVISIONS.**

SECTION 5. Conflict Provision. This Intellectual Property Security Agreement has been entered into in conjunction with the provisions of the Pledge and Security Agreement, the Credit Agreement, the other Secured Debt Documents and the Collateral Agency and Intercreditor Agreement. The rights and remedies of each party hereto with respect to the security interest granted herein are without prejudice to, and are in addition to those set forth in the Pledge and Security Agreement, the Credit Agreement, the other Secured Debt Documents and the Collateral Agency and Intercreditor Agreement, all terms and provisions of which are incorporated herein by reference. In the event that any provisions of this Intellectual Property Security Agreement are in conflict with the Pledge and Security Agreement, the Credit Agreement, the other Secured Debt Documents or the Collateral Agency and Intercreditor Agreement, the provisions of with the Pledge and Security Agreement, the Credit Agreement, the other Secured Debt Documents or the Collateral Agency and Intercreditor Agreement shall govern.

IN WITNESS WHEREOF, each of the undersigned has caused this Intellectual Property Security Agreement to be duly executed and delivered as of the date first above written.

[NAME OF GRANTOR]

By: _____
Name:
Title:

Schedule 1
to Intellectual Property Security Agreement

TRADEMARKS

PATENTS

COPYRIGHTS

Annex 1
ASSUMPTION AGREEMENT

This Assumption Agreement dated as of [____], [20__] (this "Assumption Agreement"), is made by [____] (the "Additional Grantor"), in favor of Crédit Agricole Corporate and Investment Bank ("CA CIB"), as collateral agent (in such capacity and together with its successors in such capacity, the "Collateral Agent") for the benefit of the Secured Parties (as defined in the Credit Agreement defined below) [and the Administrative Agents]¹.

WHEREAS, McDermott Technology (Americas), Inc., a Delaware corporation, McDermott Technology (US), Inc., a Delaware corporation, and McDermott Technology, B.V., a private company with limited liability (*besloten vennootschap met beperkte aansprakelijkheid*) incorporated under the laws of the Netherlands (each a "Borrower" and collectively the "Borrowers") have entered into the Superpriority Senior Secured Debtor-in-Possession Credit Agreement dated as of January 23, 2020 (as amended, restated, supplemented or otherwise modified from time to time, the "Credit Agreement") among the Borrowers, McDermott International, Inc., a Panamanian corporation (the "Parent"), the Lenders, the Issuers, CA CIB, as administrative agent for the Revolving Facility (the "Revolving Administrative Agent") and Barclays Bank PLC, as administrative agent for the Term Facility (the "Term Loan Administrative Agent").

In connection with the Credit Agreement and the other Loan Documents, certain Secured Parties have entered into that certain Collateral Agency Agreement dated as of January 23, 2020 (as the same may be amended, amended and restated, supplemented or otherwise modified, renewed or replaced from time to time, the "Collateral Agency Agreement"), among the Revolving Administrative Agent, the Collateral Agent, and the Term Loan Administrative Agent, and acknowledged and agreed by the Borrowers, the Parent and the other Grantors party thereto from time to time, pursuant to which the Secured Parties appointed the Collateral Agent as their agent, for the ratable benefit of all the Secured Parties, in connection with, among other things, this Agreement. Unless otherwise defined herein, terms defined in the Credit Agreement and used herein have the meanings given to them in the Credit Agreement.

WHEREAS, in connection with (i) the Credit Agreement and (ii) the other Loan Documents, the Parent, the Borrowers and certain of the Parent's Subsidiaries (other than the Additional Grantor) have entered into the Pledge and Security Agreement, dated as of January 23, 2020 (as amended, restated, supplemented or otherwise modified from time to time, the "Pledge and Security Agreement"), in favor of the Collateral Agent for the benefit of the Secured Parties;

WHEREAS, the Credit Agreement requires the Additional Grantor to become a party to the Pledge and Security Agreement as a Grantor (as defined in the Pledge and Security Agreement); and

¹ [To be included if Section 2 of the Assumption Agreement is included.]

WHEREAS, the Additional Grantor has agreed to execute and deliver this Assumption Agreement in order to become a party to the Pledge and Security Agreement as a Grantor thereunder;

NOW, THEREFORE, IT IS AGREED:

SECTION 1. Pledge and Security Agreement. By executing and delivering this Assumption Agreement, the Additional Grantor, as provided in Section 8.14 of the Pledge and Security Agreement, hereby becomes a party to the Pledge and Security Agreement as a Grantor thereunder with the same force and effect as if originally named therein as a Grantor. In accordance with the terms of the Pledge and Security Agreement and without limiting the generality of the foregoing, the Additional Grantor hereby expressly (a) assumes all obligations and liabilities of a Grantor under the Pledge and Security Agreement and (b) grants to the Collateral Agent, for the benefit of the Secured Parties in accordance with the Collateral Agency Agreement, a security interest in the Additional Grantor's right, title and interest in and to the Collateral (as defined in the Pledge and Security Agreement), wherever located and whether now owned or at any time hereafter acquired by the Additional Grantor or in which the Additional Grantor now has or at any time in the future may acquire any right, title or interest, as security for the prompt and complete payment and performance when due (whether at stated maturity, by acceleration or otherwise) of the Additional Grantor's Obligations. The information set forth in Annex 1 hereto is hereby added to the information set forth in Schedules []² to the Pledge and Security Agreement. The Additional Grantor hereby makes each of the representations and warranties contained in Section 4 of the Pledge and Security Agreement (as supplemented by, and after giving effect to, this Assumption Agreement and the Schedules attached hereto) as of the date hereof.

SECTION 2. [The Additional Grantor, the Collateral Agent, and each Administrative Agent hereby agree that Section 8.17 of the Pledge and Security Agreement is hereby supplemented with new clause [] as follows: []].]

SECTION 3. GOVERNING LAW. THIS ASSUMPTION AGREEMENT AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES HERETO SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK, WITHOUT REGARD TO ITS CONFLICTS OF LAWS PROVISIONS.

[Remainder of this page intentionally left blank]

² Refer to each applicable Schedule to be supplemented.

IN WITNESS WHEREOF, the undersigned has caused this Assumption Agreement to be duly executed and delivered as of the date first above written.

[ADDITIONAL GRANTOR]

By: _____

Name:

Title:

[Signature Page to Assumption Agreement]

ANNEX 1

SCHEDULE 4.3 TO PLEDGE AND SECURITY AGREEMENT

PERFECTED FIRST PRIORITY LIENS

UCC or PPSA Filings

A UCC1 Financing Statement or a PPSA financing statement, as applicable, listing the Additional Grantor, as debtor, and the Collateral Agent, as secured party, should be filed in the appropriate governmental office set forth below. Each such UCC1 Financing Statement or PPSA financing statement, as applicable, will need to include a description of the Collateral that complies with Section 9-504 of the Uniform Commercial Code or with the PPSA, as the case may be.

Grantor	Jurisdiction(s) of Filing

ANNEX 1

**SCHEDULE 4.4
TO PLEDGE AND SECURITY AGREEMENT**

NAME; JURISDICTION OF ORGANIZATION, ETC.

<u>Exact Legal Name of Grantor</u>	<u>Type of Organization</u>	<u>Jurisdiction of Organization or Incorporation</u>	<u>Organizational Identification Number</u>	<u>Chief Executive Office</u>

Prior Names during last 5 years:

Prior Addresses during last 5 years:

ANNEX 1

SCHEDULE 4.5
TO PLEDGE AND SECURITY AGREEMENT

INVENTORY LOCATIONS

[Annex 1 - Supplement to the Pledge and Security Agreement]

ANNEX 1

SCHEDULE 4.7 TO PLEDGE AND SECURITY AGREEMENT

INVESTMENT PROPERTY

Pledged Stock:

<u>Grantor</u>	<u>Issuer</u>	<u>Type of Organization</u>	<u># of Shares Owned</u>	<u>Total Shares Outstanding</u>	<u>% of Interest Pledged</u>	<u>Certificate No.</u>	<u>Par Value</u>

Pledged LLC Interests:

<u>Grantor</u>	<u>Issuer</u>	<u>Type of Organization</u>	<u># of Interest Owned</u>	<u>Total Shares Outstanding</u>	<u>% of Interest Pledged</u>	<u>Certificate No.</u>	<u>Par Value</u>

Pledged Partnership Interests:

<u>Grantor</u>	<u>Issuer</u>	<u>Type of Organization</u>	<u># of Interest Owned</u>	<u>Total Shares Outstanding</u>	<u>% of Interest Pledged</u>	<u>Certificate No.</u>	<u>Par Value</u>

Pledged Trust Interests:

Pledged Notes:

Pledged Commodities Contracts:

ANNEX 1

**SCHEDULE 4.9
TO PLEDGE AND SECURITY AGREEMENT**

INTELLECTUAL PROPERTY

- (A) Material Copyright Licenses
- (B) Copyrights
- (C) Material Patent Licenses
- (D) Patents
- (E) Material Trademark Licenses
- (F) Trademarks
- (G) Material Trade Secret Licenses

[Annex 1 - Supplement to the Pledge and Security Agreement]

ANNEX 1

SCHEDULE 4.11
TO PLEDGE AND SECURITY AGREEMENT

COMMERCIAL TORT CLAIMS

[Annex 1 - Supplement to the Pledge and Security Agreement]

ANNEX 1

SCHEDULE 4.12
TO PLEDGE AND SECURITY AGREEMENT

EXCLUDED PLEDGED COLLATERAL

[Annex 1 - Supplement to the Pledge and Security Agreement]

ANNEX 1

SCHEDULE 4.13
TO PLEDGE AND SECURITY AGREEMENT

DEPOSIT ACCOUNTS AND SECURITIES ACCOUNTS

[Annex 1 - Supplement to the Pledge and Security Agreement]