

Form PTO-1595 (Rev. 07/05)
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U.S. DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

MR

**RECORDATION FORM COVER SHEET
PATENTS ONLY**

S-137,431

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)

CERAMATEC, INC.

2. Name and address of receiving party(ies)Name: United States Department of Energy

Internal Address: _____

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No**3. Nature of conveyance/Execution Date(s):**Execution Date(s) 05/23/2016☐ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Joint Research Agreement☐ Government Interest Assignment☒ Executive Order 9424, Confirmatory License☐ Other _____Street Address: 1000 Independence Ave., S.W.City: WashingtonState: D.C.Country: USA Zip: 20585Additional name(s) & address(es) attached? ☐ Yes ☒ No**4. Application or patent number(s):**☐ This document is being filed together with a new application.

A. Patent Application No.(s)

12/916,984

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No**5. Name and address to whom correspondence concerning document should be mailed:**Name: Michael J. DobbsInternal Address: U. S. Dept. of Energy, IPLDStreet Address: 9800 S. Cass AveCity: ArgonneState: IL Zip: 60439Phone Number: 630-252-2164Fax Number: 630-252-2779Email Address: Confirmatory.License@science.doe.gov**6. Total number of applications and patents involved: 1****7. Total fee (37 CFR 1.21(h) & 3.41) \$**☐ Authorized to be charged by credit card☐ Authorized to be charged to deposit account☐ Enclosed☒ None required (government interest not affecting title)**8. Payment Information**

a. Credit Card Last 4 Numbers _____

Expiration Date _____

b. Deposit Account Number _____

Authorized User Name _____

9. Signature:

Signature

6/2/2016
Date

Timothy Harney #38,174

Name of Person Signing

Total number of pages including cover sheet, attachments, and documents:

8

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

PATENT**REEL: 038990 FRAME: 0449**

700519208

CONFIRMATORY LICENSE

(Large Business - Identified Waiver)

Title : Upgrading of Petroleum Oil Feedstocks Using Alkali Metals and Hydrocarbons
Inventor(s) : John Howard Gordon
Serial No. : US 12/916,984 Filing Date (U.S.): 11/1/2010
Contractor : Ceramatec, Inc. (UT) DOE Case No.: 137,431
DOE Contract No.: DE-FE0000408 DOE Identified Waiver No.: W(I)-2015-002

Foreign Applications filed or intended at Contractor's Expense in (countries): See Attachment A

A waiver of Government rights in the above-identified Subject Invention having been granted by the U.S. Department of Energy (DOE) to the Contractor, the effective date of said waiver is October 27, 2015.

Accordingly, this document is confirmatory of the paid-up license required to be granted to the Government under 10 CFR 784 in the Subject Invention, patent application and any resulting patent as well as any continuation, divisional, reissue, supplemental or continuation-in-part thereof, and of all other rights reserved to the Government under 10 CFR 784 said license and other rights including the following:

(1) Government License and Inspection Rights

With respect to any Subject Invention in which title has been waived to the Contractor, the Federal Government retains a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the Subject Invention throughout the world;

The Government is hereby granted the irrevocable power to inspect and make copies of the above-identified patent application.

(2) Conveyance Terms and Conditions - Domestic

(a) Subject to the minimum rights reserved to the Contractor in paragraph (8) herein, the Contractor agrees to convey to the Government, upon request, the entire domestic right, title, and interest in the above-identified invention when the Contractor:

(i) decides not to continue prosecution of the patent application filed on the above-identified invention;

(ii) at any time, no longer desires to retain title in the above-identified invention; or

(iii) fails to have a United States patent application filed on the invention in accordance with the terms and conditions of paragraph (4) herein.

(b) Conveyances requested pursuant to the above subparagraphs (2)(a)(i-iii) shall be made by delivering to the DOE Patent Counsel duly executed instruments and such other papers as are deemed necessary to vest in the Government the entire right, title, and interest in the invention to enable the Government to apply for and prosecute patent applications covering the invention in this country, or otherwise establish its ownership of the invention.

(3) Conveyance Terms and Conditions - Foreign

(a) Subject to the minimum rights reserved to the Contractor in paragraph (8) herein, the Contractor agrees to convey to the Government, upon request, the entire right, title, and interest in the above-identified invention in any foreign country if the Contractor:

(i) does not elect pursuant to paragraph (5) herein to retain such rights in the foreign country; or

(ii) fails to have a patent application filed in the foreign country on said invention in accordance with paragraph (5) herein, or decides not to continue prosecution or not to pay any maintenance fees covering such invention. To avoid forfeiture of the patent application or patent, the Contractor shall, not less than sixty (60) days before the expiration period for any action required by the foreign Patent Office, notify the DOE Patent Counsel of such failure or decision, and deliver to the DOE Patent Counsel the executed instruments necessary for the conveyance specified in this paragraph.

(b) Conveyances requested pursuant to the above subparagraphs (3)(a)(i) and (3)(a)(ii) shall be made by delivering to the DOE Patent Counsel duly executed instruments and such other papers as are deemed necessary to vest in the Government the entire right, title, and interest in the invention to enable the Government to apply for and prosecute patent applications covering the invention in a foreign country, or otherwise establish its ownership of the invention.

(4) Filing of Patent Application - Domestic

(a) The Contractor shall have a domestic patent application for the above-identified Subject Invention filed within six (6) months after the effective date of this waiver. The Contractor shall promptly notify the DOE Patent Counsel of any decision not to file such an application.

(b) For the above-identified invention for which a patent application has been filed by the Contractor, the Contractor shall:

(i) within two (2) months after the filing or within two (2) months after submission of an invention disclosure pursuant to the requirements of the above contract if the patent application previously has been filed, deliver to the DOE Patent Counsel a copy of the application as filed including the filing date and serial number;

(ii) include the following statement in the second paragraph of the specification of the application and any patents issued on the identified invention, "The Government has rights in this invention pursuant to Contract No. DE-FE0000408 awarded by the U. S. Department of Energy";

(iii) provide the DOE Patent Counsel with a copy of any patent issued on the application within two (2) months after such patent issues; and

(iv) not less than thirty (30) days before the expiration of the response period for any action required by the Patent and Trademark Office, notify the DOE Patent Counsel of any decision not to continue prosecution of the application and deliver to the DOE Patent Counsel executed instruments granting the Government a power of attorney.

(c) If the Contractor at any time prior to the filing of the application elects not to retain the rights waived for the above-identified invention, the Contractor shall inform the DOE Patent Counsel promptly in writing of the date and identity of any sale, or placing on sale, public use, or public disclosure of the invention which may constitute a statutory bar under 35 U.S.C. 102, which was authorized by or known to the Contractor or any contemplated action of this nature.

(5) Filing of Patent Applications - Foreign

(a) With respect to the rights waived for the above-identified invention in a foreign country, the Contractor shall have a patent application filed on the invention in that country in accordance with applicable statutes and regulations and within one of the following periods:

(i) eight (8) months from the date of a corresponding United States application filed by the Contractor, or if such an application is not filed, six (6) months from the date the invention is submitted as a

disclosure pursuant to the requirements of the above contract;

(ii) six (6) months from the date a license is granted by the Commissioner of Patents and Trademarks to file foreign applications where such filing has been prohibited by security reasons; or

(iii) such longer period as may be approved by the DOE Patent Counsel.

(b) The Contractor shall notify the DOE Patent Counsel promptly of each foreign application filed and upon written request shall furnish an English version of the application without additional compensation.

(6) Other Terms and Conditions of Waived Rights

(a) Reporting on Utilization of Subject Inventions

The Contractor agrees to submit on request periodic reports no more frequently than annually on the utilization of the Subject Invention on efforts at obtaining such utilization that are being made by the Contractor or its licensees or assignees. Such reports shall include information regarding the status of development, data or first commercial sale or use, gross royalties received by the Contractor, and such other data and information as DOE may reasonably specify. The Contractor also agrees to provide additional reports as may be requested by DOE in connection with a march-in proceeding undertaken by DOE in accordance with paragraph (b) of this clause. To the extent data or information supplied under this section is considered by the Contractor, its licensee or assignee to be privileged and confidential and is so marked, DOE agrees that, to the extent permitted by 35 U.S.C. 202 (c)(5), it will not disclose such information to persons outside the Government.

(b) March-in-Rights

The Contractor agrees that with respect to the Subject Invention in which it has acquired title, DOE has the right in accordance with the procedures in 37 CFR 401.6 and any supplemental regulations of DOE, to require the Contractor, an assignee or exclusive licensee of the subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the Contractor, assignee, or exclusive licensee refuses such a request, DOE has the right to grant such a license itself if DOE determines that;

(1) Such action is necessary because the Contractor or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the Subject Invention in such field of use;

(2) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Contractor, assignee, or their licensees;

(3) Such action is necessary to meet requirements for public use specified by federal regulations and such requirements are not reasonably satisfied by the Contractor, assignee, or licensees.

(4) Such action is necessary because the agreement required by paragraph (c) of this clause has not been obtained or waived or because a licensee of the exclusive right to use or sell the Subject Invention in the United States is in breach of such agreement.

(c) Preference for United States Industry

[Waived in lieu of the modified U.S. Competitiveness provision. See clause (10) below]

(7) Terminations

(a) The waiver granted to the Contractor in connection with the Subject Invention, or any retention of rights by the Contractor herein may, subject to the minimum rights reserved in paragraph (8) hereof, be terminated at the discretion of the Secretary or his/her designee in whole or in part, if the request for waiver or retention of rights by the Contractor is found to contain false material statements or non-disclosure of material facts, and such were specifically relied upon in reaching the waiver determination or the agreement to the retention of rights by the Contractor.

(b) Any waiver of the rights as applied to the above-identified Subject Invention may be terminated at the discretion of the Secretary or his/her designee, in whole or in part, if the Contractor is to comply with the provisions set forth in paragraphs (4) or (6) herein and such failure is determined by the Secretary or his/her designee to be material and detrimental to the interests of the United States and the general public.

(c) Prior to terminating any waiver of rights under paragraph (7)(a) or (7)(b) of this clause, the Contractor will be given written notice of the intention to terminate the waiver of rights, the extent of such proposed termination and the reasons therefor, and a period of 30 days, or such longer period as the Secretary or his/her designee shall determine for good cause shown in writing, to show cause why the waiver of rights should not be so terminated.

(d) All terminations of waivers of rights under paragraph (7)(a) shall be subject to the rights granted in paragraph (8) of this clause, and termination shall normally be partial in nature, requiring the Contractor to grant nonexclusive or partially exclusive licenses to responsible applicants upon terms reasonable under the circumstances.

(8) Minimum Contractor License

There is reserved to the Contractor an irrevocable, nonexclusive, paid-up license in each patent application filed in any country on the above-identified invention and any resulting patent in which the

Government acquires title. The license shall extend to the Contractor's domestic subsidiaries and affiliates, if any, within the corporate structure of which the Contractor is a part and shall include the right to grant sublicenses of the same scope to the extent the Contractor was legally obligated to do so at the time the contract was awarded. The license shall be transferable only with approval of DOE except when transferred to the successor of that part of the Contractor's business to which the invention pertains.

(9) Reservation of Government Rights

It is understood and agreed that this license does not preclude the Government from asserting rights under the provisions of said contract or of any other agreement between the Government and the Contractor, or any other rights of the Government with respect to the above-identified invention.

(10) U.S. Competitiveness Clause (feedstock dependent modification)

The Petitioner agrees that: (1) any oil, petroleum, or petroleum based substance originating from a hydrocarbon deposit or other source within United States and processed using any waived invention will be substantially processed in the United States; and (2) any oil, petroleum, or petroleum based substance originating from a hydrocarbon deposit or other source within United States will not be exported outside the United States for processing using any waived invention unless the Petitioner can show to the satisfaction of the DOE that it is not commercially feasible to do so. The Petitioner also agrees that the ceramic membranes necessary to practice the process embodied by any of the waived inventions will be substantially manufactured in the United States unless Petitioner can show to the satisfaction of the DOE that it is not commercially feasible to do so. The Petitioner and any licensee, sub-licensee or assignee thereof, agrees that it will not license, sub-license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements. In light of the above commitments and the commercial infeasibility of transporting heavy oil long distances for processing, any oil, petroleum, or petroleum based substance originating from a hydrocarbon deposit or other source outside the United States may be processed outside of the United States using any waived invention and such product of such processing may be imported into the United States. Should the Petitioner undergo a change in ownership amounting to a controlling interest, then the waiver is suspended until the change in ownership is approved in writing by the DOE. If the Petitioner contemplates that it may undergo a change in ownership amounting to a controlling interest, the Petitioner may request that the DOE pre-approve such change in ownership. The DOE will make all reasonable attempts to review and provide a response to such pre-approval requests within 30 days of receipt of all the information deemed necessary by the DOE for making such a decision. Any assignments, licenses or other transfers of rights in the waived invention granted by the Petitioner prior to the change in controlling interest of the Petitioner, including the right of the recipient of such assignment, license or other transfer to grant further assignments, license or other transfers after such change, shall survive and continue notwithstanding whether DOE approval has been obtained.

[Signature Block Follows]

Signed this 23 day of May, 2016
(SEAL)

Ceramatec Inc. (Contractor)

By  _____

2425 South 900 West, Salt Lake City, Utah 84119
(Business Address)

Attachment A

Upgrading of Petroleum Oil Feedstocks Using Alkali Metals and Hydrocarbons

CONTRACTOR FILE #	DOE CONTRACT #	DOE IDENTIFIED WAIVER #	DOE CASE #	TITLE	COUNTRY	APP. # or PAT.#	FILING or ISSUE DATE	INVENTORS
1000.2.196BR	DE-FE0000408	W(I)-2015-002	137,431	Upgrading of Petroleum Oil Feedstocks Using Alkali Metals and Hydrocarbons	Brazil	1120120103440 (pending)	5/2/2012	John Howard Gordon
1000.2.196CA	DE-FE0000408	W(I)-2015-002	137,431	Upgrading of Petroleum Oil Feedstocks Using Alkali Metals and Hydrocarbons	Canada	2,769,863 (pending)	2/1/2012	John Howard Gordon
1000.2.196CN	DE-FE0000408	W(I)-2015-002	137,431	Upgrading of Petroleum Oil Feedstocks Using Alkali Metals and Hydrocarbons	China	ZL20108004977 0.5 (issued)	12/24/2014	John Howard Gordon
1000.2.196CN.1 DIV	DE-FE0000408	W(I)-2015-002	137,431	Upgrading of Petroleum Oil Feedstocks Using Alkali Metals and Hydrocarbons	China	201410789832.6 (pending)	12/17/2014	John Howard Gordon
1000.2.196EP	DE-FE0000408	W(I)-2015-002	137,431	Upgrading of Petroleum Oil Feedstocks Using Alkali Metals and Hydrocarbons	European Patent Office	10827610.6 (pending)	4/17/2012	John Howard Gordon
1000.2.196IN	DE-FE0000408	W(I)-2015-002	137,431	Upgrading of Petroleum Oil	India	225/MUMNP/20 12	1/29/2012	John Howard