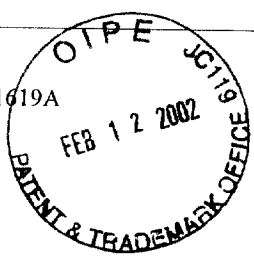


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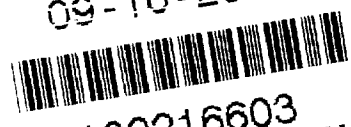
FORM PTO-1619A
Expires 06/30/99
OMB 0651-0027



MAD
9/10/02

U.S. Department of Commerce
Patent and Trademark Office
PATENT

09-10-2002



RECC

102216603
COVER SHEET

PATENTS ONLY

TO: The Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy(ies).

Submission Type

Conveyance Type

New 2-12-02

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Correction of PTO Error
Reel # Frame #

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Assignment Security Agreement

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Name (line 1)

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Name (line 2)

Execution Date
Month Day Year

Execution Date
Month Day Year

Receiving Party

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If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)

402

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Enter for the first Receiving Party only.

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Address (line 2)

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Correspondent Name and Address

Area Code and Telephone Number

Name

Address (line 1)

Address (line 2)

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Pages Enter the total number of pages of the attached conveyance document including any attachments. #

Application Number(s) or Patent Number(s) Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

Patent Number(s)

<input type="text" value="09/597,876"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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If this document is being filed together with a new Patent Application, enter the date the patent application was filed. Month Day Year

Patent Cooperation Treaty (PCT)
Enter PCT application number only if a U.S. Application Number has not been assigned.
PCT PCT PCT
PCT PCT PCT

Number of Properties Enter the total number of properties involved. #

Fee Amount Fee Amount for Properties Listed (37 CFR 3.41): \$

Method of Payment: Enclosed Deposit Account

Deposit Account (Enter for payment by deposit account or if additional fees can be charged to the Deposit Account Number: #

Authorization to charge additional fees: Yes No

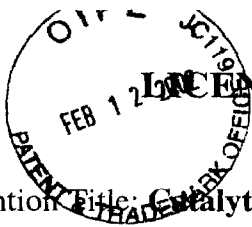
Statement and Signature

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Charges to deposit account are authorized, as indicated herein.

Janet L. Rego
Name of Person Signing

Janet L. Rego
Signature

1/22/2000
Date



LICENSE TO THE UNITED STATES GOVERNMENT

Invention Title: **Catalytic Destruction of Water and Soil Contaminants in Recirculating Wells**

Inventors: **Walt McNab, and Martin Reinhard**

Patent or Application Serial No: **09/597,876**

U.S. Filing / Issue Date: **6/20/00**

Agency: **Department of Energy**

Grant / Contract: **DOE W-7405-ENG-48 with University of California
and Subcontract No. B328012 with Stanford University**

Grantee / Contractor File:

Foreign Applications:

The invention identified above is a Subject Invention under 35 U.S.C. 200, et seq., and the Standard Patent Rights clause at 37 CFR 401.14 of FAR 52.227-11, which are included among the terms of the above-identified grant/contract award from the above agency. This document is confirmatory of:

1. The Nonexclusive, nontransferable, irrevocable, paid-up license granted to the Federal Government in the invention described in the patent application and in any and all divisions, continuations, and continuations in part, and in any and all patents and re-issues granted thereon; and
2. All other rights acquired by the Government by reason of the above identified grant/contract award and the laws and regulations which are applicable to the award.

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

Signed this 18th day of October, 2001

By: *Katharine Ku*
Katharine Ku, Director, Office of Technology Licensing

For: The Board of Trustees of the Leland Stanford Junior University
At: Stanford University, Office of Technology Licensing, 900 Welch Road, Suite 350, Palo Alto, CA 94304-1850



S96-055
SAFE

INTER-INSTITUTIONAL AGREEMENT

between

**THE BOARD OF TRUSTEES OF
THE LELAND STANFORD JUNIOR UNIVERSITY**

and

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

for

**CATALYTIC REDUCTIVE DEHALOGENATION SYSTEM FOR
IN-SITU DESTRUCTION OF CHLORINATED HYDROCARBONS
IN GROUNDWATER USING A REACTIVE WELL**

LLNL Case No. TO-4009-00

May 2000

**PATENT
REEL: 013259 FRAME: 0673**

**INTER-INSTITUTIONAL AGREEMENT
FOR
CATALYTIC REDUCTIVE DEHALOGENATION SYSTEM FOR IN-SITU
DESTRUCTION OF CHLORINATED HYDROCARBONS IN
GROUNDWATER USING A REACTIVE WELL**

THIS AGREEMENT is made and entered into by and between The Board of Trustees of The Leland Stanford Junior University ("STANFORD") having an address at Office of Technology Licensing, Stanford University, 900 Welch Road, Suite 350; Palo Alto, CA 94305-1850; and The Regents of the University of California ("THE REGENTS"), under its U.S. Department of Energy Contract No. W-7405-ENG-48 to manage and operate Lawrence Livermore National Laboratory ("LLNL"). THE REGENTS is a corporation organized and existing under the laws of the State of California, with its principal office at 1111 Franklin Street, 12th Floor, Oakland, CA 94607-5200. The agreement is effective on the date of signing by the last party to sign.

BACKGROUND

1. Certain research performed at The University of California and at STANFORD resulted in the development of inventions disclosed in LLNL Case No. IL-10474 and IL-10574 ("Inventions").
2. The development of the Inventions was sponsored in part by the Department of Energy (DOE). This agreement, any licenses, and the Inventions, are subject to obligations to the Federal Government including obligations under 35 U.S.C. §§ 200-212 and applicable governmental regulations.
3. The inventions described in IL-10474 were developed by Walt W. McNab Jr., employee of LLNL, and Martin Reinhard, employee of STANFORD.

4. The inventions described in IL-10574 were developed by Walt W. McNab Jr., Roberto Ruiz, Tristan Pico, employees of LLNL.
5. It is the mutual desire of the parties that, for the purposes of this Agreement, the Inventions be administered and commercialized by THE REGENTS on behalf of both parties and, to that end, STANFORD agrees not to grant to any person (other than THE REGENTS) any right, title, or interest in and to the Inventions or the Patent Rights.

STANFORD and THE REGENTS agree:

1. **DEFINITIONS**

- 1.1 "Patent Rights" means all right, title and interest in, to and under any of the following:

LLNL Case Number	U.S. Application Number or U.S. Patent Number	Filing or Issue Date
IL-10474	60/174898 (Provisional)	1/7/2000 Provisional
IL-10574		To Be Filed

filed by THE REGENTS; and any divisions, continuations; or continuations-in-part (but only to the extent such continuations-in-part have inventors from both institutions) thereof; any corresponding foreign applications thereof; and any U.S. or joint foreign patents issued thereon or reissues or extensions thereof, assigned by each inventor to his respective institution.

- 1.2 "License Agreement" means any license agreement that is entered into by THE REGENTS under this Agreement and grants to a third party the right to make,

have made, use, and/or sell products covered by Patent Rights, or any agreement granting an option for such a license.

- 1.3 "Licensee" means any licensee or optionee to a License Agreement.
- 1.4 "Direct Case Expenses" means unreimbursed expenses charged against licensing income for costs of patenting, protecting and preserving patent rights, maintaining patents, the licensing of patent and related property rights, and such other costs, taxes or reimbursements as may be necessary or required by law.
- 1.5 "Royalty Net Income" means royalty income after deductions for any Direct Case Expenses.

2. PATENT PROSECUTION AND PROTECTION

- 2.1 THE REGENTS shall prepare and file appropriate United States patent applications covering the Inventions and shall provide to STANFORD, on request, all serial numbers and filing dates, together with copies of all the applications, including, upon request by STANFORD, copies of all Patent Office Actions, responses and all other Patent Office communications. THE REGENTS shall promptly provide to STANFORD copies of all patents issued for Inventions.
- 2.2 The parties shall notify each other within eight months of any United States filing, whether, when, and in what countries, they wish to file foreign patent applications, and will cooperate with each other in obtaining foreign rights in Inventions. If foreign patent applications are filed, the parties shall provide to each other all serial numbers and filing dates, copies of foreign patent applications and patent office actions as each party may request from the other in the course of prosecution.

2.3 THE REGENTS shall record Assignments of domestic Patent Rights in the United States Patent and Trademark Office and shall provide STANFORD with a photocopy of each recorded Assignment. Each Inventor will assign to his or her home Institution.

2.4 Notwithstanding any other provision of this Agreement, THE REGENTS shall not abandon the prosecution of any patent application (except for purposes of filing continuation or continuation-in-part applications) or the maintenance of any Patent Rights without prior written notice to STANFORD.

3. LICENSING

3.1 STANFORD shall not grant to any person or entity (other than THE REGENTS) any right, license, title, or interest in, to or under the Patent Rights. STANFORD grants to THE REGENTS the sole responsibility for administering and commercializing the Invention, subject to the provisions of this Agreement.

3.2 THE REGENTS shall diligently seek a Licensee for the commercial development of the Inventions and shall promptly provide to STANFORD copies of all License Agreements relating to the Inventions.

3.3 THE REGENTS shall not issue any paid-up licenses or assign Patent Rights to any third party without the prior written consent of STANFORD. Field of use exclusive or limited exclusive is not an assignment for purposes of this Article.

3.4 License Agreements will expressly reserve to THE REGENTS and STANFORD, the right to use the Inventions and associated technology for educational and research purposes.

4. FINANCIAL TERMS

- 4.1 THE REGENTS shall distribute to STANFORD twenty-five percent (25 %) of Royalty Net Income accrued during the most recently completed fiscal year (which ends September 30). The distribution shall be done by February 28 of the following year. This amount shall be distributed to STANFORD before THE REGENTS makes its internal distributions to LLNL inventors, programs, and for administrative overhead.
- 4.2 Each party is solely responsible for calculating and distributing to its respective Inventors any share of Royalty Net Income due in accordance with its respective patent policy.
- 4.3 If THE REGENTS incurs any Direct Case Expenses that are not reimbursed by a Licensee(s), then STANFORD shall reimburse THE REGENTS for 25% of all these costs and charges within thirty (30) days following receipt of an itemized invoice from THE REGENTS. Any sums due by STANFORD for Direct Case Expenses shall be paid by check, payable to "The Regents of the University of California" and sent to:
- Lawrence Livermore National Laboratory
Industrial Partnerships and Commercialization
P.O. Box 808, L-795
7000 East Ave., L-795
Livermore, CA 94550
Attention: Director, IPAC
Fax: (925) 423-8988
With a reference to LLNL Case No. TO-4009-00
- 4.4 In any country where only one of the Parties undertakes the filing, issuance, and maintenance of any patent prosecution, the corresponding prosecution expenses shall be at said Party's sole expense.
-

5. RECORDS AND REPORTS

- 5.1 THE REGENTS shall keep complete, true and accurate accounts of all expenses and of all proceeds received by it from each Licensee and shall permit STANFORD to allow its own agents or a certified public accounting firm which is reasonably acceptable to THE REGENTS to examine its books and records in order to verify the payments due or owing under this Agreement. STANFORD shall pay the cost of each examination and shall request no more than one examination per year.
- 5.2 THE REGENTS shall submit to STANFORD, on request, a report, setting forth the status of all patent prosecution, commercial development, and licensing activity relating to the Inventions.

6. PATENT INFRINGEMENT

- 6.1 In the event that patent administrators responsible for Patent Rights at THE REGENTS or STANFORD learn of the substantial infringement of any patent covered by this agreement, the party who learned of the infringement shall call the attention of the other party to the infringement and provide written evidence of infringement. THE REGENTS shall, in cooperation with STANFORD use its best efforts to terminate infringement without litigation.
- 6.2 If the efforts of the parties are not successful in abating the infringement within 90 days after the infringer has been notified of the infringement, then THE REGENTS may:
- 6.2.1 commence suit on its own account; or
 - 6.2.2 permit an exclusive licensee to commence suit on its own account, or with THE REGENTS; or

6.2.3 request that STANFORD join as a party plaintiff in a patent infringement litigation.

STANFORD has ninety (90) days to inform THE REGENTS of its decision to join or not to join in such litigation. In no event may THE REGENTS or STANFORD be joined in any suit without their prior written consent. In the event that THE REGENTS or any exclusive licensee of THE REGENTS chooses not to commence suit, STANFORD may do so at its own election.

6.3 Legal action to terminate infringement or to recover damages, as is decided upon under paragraph 6.2, will be at the full expense of the party bringing suit. All amounts recovered thereby will belong to that party, except that any recovery in excess of litigation costs which covers future sales will be deemed to be Net Revenues and royalties will be shared as specified in Paragraph 4.1. The other party will not share in the portion of the recovery, if any, that is payment for "willful infringement." Legal action brought jointly by the parties and fully participated in by both parties will be at the joint expense of the parties (in shares to be mutually agreed upon), and all recoveries will be shared jointly by them in direct proportion to the share of expense paid by each party.

6.4 Each party shall cooperate with the other in litigation proceedings instituted under this Agreement. The litigation will be controlled by the party bringing the suit, except that either party may be represented by counsel of its choice in any suit brought by the other party.

7. GOVERNING LAWS

7.1 THIS AGREEMENT IS GOVERNED BY AND INTERPRETED IN ACCORDANCE WITH THE LAWS OF THE STATE OF CALIFORNIA, except that the scope and validity of any patent or patent application in Patent Rights

are governed by the applicable laws of the country of that patent or patent application.

8. NOTICES

8.1 Any notice required or permitted to be given to the parties hereto is properly given if delivered, in writing, in person, sent by first-class certified mail, or by overnight carrier, to the following addresses, or to such other addresses as may be designated in writing by the parties from time to time during the term of this Agreement:

To STANFORD: Office of Technology Licensing
Stanford University
900 Welch Road, Suite 350
Palo Alto, CA 94305-1850
Attention: Director
Phone: (650) 723-0651
Fax: (650) 725-7295

To THE REGENTS: Lawrence Livermore National Laboratory
Industrial Partnerships and Commercialization
P.O. Box 808, L-795
7000 East Avenue, L-795
Livermore, CA 94550
Attention: Director, IPAC
Fax: (925) 423-8988

9. TERMINATION

9.1 This Agreement is in full force and effect from the effective date on page one and remains in effect for the life of the last-to-expire patent in Patent Rights, unless

otherwise terminated by operation of law or by acts of the parties in accordance with the terms of this Agreement.

- 9.2 If four (4) years have passed from the effective date of this Agreement and no License Agreement is in effect or has been agreed upon as to all material financial terms, either party may terminate this Agreement for any reason, provided that the terminating party has first provided at least sixty (60) days' written notice to the other party, but in any event not less than sixty (60) days' written notice prior to the date on which responses to any pending Patent Office actions need to be taken to preserve Patent Rights. After effective termination, each party may separately license its interest in the Patent Rights according to its policy provided that each party pays one-half of all costs which have been and will be incurred thereafter in the preparation, prosecution, and maintenance of Patent Rights. Apart from the obligation to share patent costs and apart from obligations identified in Article 10 (Confidentiality) and specific obligations accrued prior to termination, the parties will have no further rights or obligations under this Agreement after effective termination.

10. CONFIDENTIALITY

- 10.1 Subject to The California Public Records Act, STANFORD and THE REGENTS respectively shall hold the other party's proprietary business and patent prosecution information in confidence using at least the same degree of care as that party uses to protect its own proprietary information of a like nature. The disclosing party shall label or mark confidential, or as otherwise appropriate, all proprietary information. If proprietary information is orally disclosed, the disclosing party shall reduce the proprietary information to writing or to some other physically tangible form and deliver it to the receiving party within 30 days of the oral disclosure, marked and labeled as set forth above.
- Notwithstanding the foregoing:

- 10.2 Nothing in this Agreement in any way restricts or impairs the right of THE REGENTS or STANFORD to use, disclose or otherwise deal with any information or data that:
- 10.2.1 recipient can demonstrate by written records was previously known to it;
 - 10.2.2 is now, or becomes in the future, public knowledge other than through acts or omissions of recipient;
 - 10.2.3 is lawfully obtained without restrictions by recipient from sources independent of the disclosing party; or
 - 10.2.4 was made independently without the use of proprietary information received hereunder.
 - 10.2.5 is required by law to be disclosed.
- 10.3 The confidentiality obligations of the recipient under these terms will remain in effect for five (5) years from the termination date of this Agreement.

11. GENERAL

- 11.1 Use of Names and Trademarks. This Agreement does not confer any right to use any name, trade name, trademark, or other designation of either party to this Agreement (including contraction, abbreviation or simulation of any of the foregoing) in advertising, publicity, or other promotional activities. The use of the name, "The Regents of the University of California" or the name of any campus of the University of California is prohibited.
- 11.2 No Waiver. No waiver by either party hereto of any breach or default of any of the covenants or agreements herein set forth may be deemed a waiver as to any subsequent and/or similar breach or default.

11.3 No Implied License. This Agreement does not confer by implication, estoppel, or otherwise any license or rights under any patents of either party other than the specific Patent Rights, regardless of whether such patents are dominant or subordinate to Patent Rights.

11.4 Complete Agreement. This Agreement constitutes the entire agreement, both written and oral, between the parties, and all prior agreements respecting the subject matter of this Agreement, written or oral, expressed or implied, are canceled.

The parties hereto have executed this Agreement in duplicate originals.

**THE BOARD OF TRUSTEES OF THE
LELAND STANFORD JUNIOR
UNIVERSITY**

**THE REGENTS OF THE UNIVERSITY
OF CALIFORNIA**

**LAWRENCE LIVERMORE
NATIONAL LABORATORY**

By: *Luis R. Mejia*
(Signature)

By: *J. Wadsworth*
(Signature)

Name: Luis R. Mejia

Name: Jeffrey Wadsworth

Title: Acting Director, Office of
Technology Licensing

Title: Deputy Director for
Science and Technology

Date: May 24, 2000

Date: 6/7/00

Mr. William C. Daubenspeck, Patent Attorney
Department of Energy, Oakland Operations Office
Office of Chief Counsel, Intellectual Property Law Division
Livermore Office, P.O. Box 808, L-376
Livermore, CA 94550

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