

- MODEL -

Public Law 99-502, the Federal Technology Transfer Act of 1986,
as amended.

**COOPERATIVE RESEARCH AND DEVELOPMENT
AGREEMENT (hereinafter "CRADA") No. 06-N____
BETWEEN**

**NATIONAL ENERGY TECHNOLOGY LABORATORY (NETL)
U.S. DEPARTMENT OF ENERGY**

AND

(hereinafter the "Participant")
both being hereinafter jointly referred to as the "Parties"

The Parties agree to enter into this CRADA as authorized by law
and in accordance with the following terms and conditions:

ARTICLE I. DEFINITIONS

- A. "Government" means the United States of America and agencies thereof including the Department of Energy's National Energy Technology Laboratory (NETL).
- B. "DOE" means the Department of Energy, an agency of the United States of America.
- C. "NETL" is a Government-owned and operated facility engaged in the conduct of energy research and development.
- D. "Laboratory Director" means the Director of the National Energy Technology Laboratory, acting in accordance with and under the general and enumerated authority of P.L. 99-502, as amended.
- E. "Cooperative Research and Development Agreement" (CRADA) means an agreement as defined in and which conforms to the requirements of P.L. 99-502, the "Federal Technology Transfer Act of 1986," as amended.

- F. "Generated Information" means information produced in the performance of this CRADA.
- G. "Proprietary Information" means information which embodies (i) trade secrets or (ii) commercial or financial information which is privileged or confidential under the Freedom of Information Act (5 U.S.C. § 552(b)(4)), either of which is developed at private expense outside of this CRADA and is marked as Proprietary Information.
- H. "Protected CRADA Information" means Generated Information which is marked as being Protected CRADA Information by a Party to this CRADA, and which would have been Proprietary Information had it been obtained from a non-federal entity.
- I. "Unlimited Rights" means the right to use, disclose, reproduce, prepare derivative works distributed to the public, and perform publicly or display publicly in any manner or for any purpose, or to permit others to do so.
- J. "Subject Invention" means any invention of the Parties conceived or first actually reduced to practice in the performance of work under this CRADA.
- K. "Intellectual Property" means patent applications, patents, and other forms of comparable property rights protected by Federal law and its foreign counterparts.

ARTICLE II. STATEMENT OF WORK

[INSERT SOW]

ARTICLE III. TERM AND CONTRIBUTIONS OF THE PARTIES

- A. The terms of the CRADA, unless otherwise specified, shall remain in effect for _____ [STATE PERIOD OF PERFORMANCE], commencing on the date the Laboratory Director signs this agreement.

- B. The estimated value of the Participant's contribution is \$_____. The estimated value of the Government's contribution is \$_____, subject to available funding.
- C. [For CRADAs which include (non-Federal) funding on a funds-in basis, an advance payment provision will be negotiated consistent with current DOE policy.]
- D. The Parties shall have no obligation to continue or complete performance of the work at an amount in excess of the estimated contribution in paragraph B above, including any subsequent amendment.
- E. Each Party agrees to provide thirty (30) days advance notice to the other Party if the actual amount to complete performance will exceed the estimated contribution.

ARTICLE IV. PROPERTY

All tangible personal property produced or acquired under this CRADA, shall become the property of the Participant or the Government depending on whose funds were used to obtain it. Such property are listed in Attachment A. Personal property shall be disposed of as directed by the owner at the owner's expense. All jointly funded property shall be owned by the Government.

Failure of the Participant to remove its property from federal property will establish a presumption of abandonment under federal property regulations.

ARTICLE V. DISCLAIMER

THE GOVERNMENT AND THE PARTICIPANT MAKE NO EXPRESS OR IMPLIED WARRANTY AS TO THE CONDITIONS OF THE RESEARCH OR ANY INTELLECTUAL PROPERTY, GENERATED INFORMATION OR PRODUCT MADE, OR DEVELOPED UNDER THIS CRADA, OR THE OWNERSHIP, MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OF THE RESEARCH OR RESULTING PRODUCT. NEITHER THE GOVERNMENT NOR THE PARTICIPANT SHALL BE LIABLE FOR LOST PROFITS, LOST SAVINGS, SPECIAL, CONSEQUENTIAL, INCIDENTAL OR OTHER INDIRECT DAMAGES ATTRIBUTED TO SUCH RESEARCH OR RESULTING PRODUCT, INTELLECTUAL PROPERTY, GENERATED INFORMATION, OR PRODUCT MADE OR DEVELOPED UNDER THIS CRADA.

ARTICLE VI. PRODUCT LIABILITY

Except for any liability resulting from any negligent acts or omissions of the Government, the Participant indemnifies the Government for all damages, costs, and expenses, including attorney's fees, arising from personal injury or property damage occurring as a result of the making, using, or selling of a product, process, or service by or on behalf of the Participant, its assignees, or licensees, which was derived from the work performed under this CRADA. In respect to this article, the Government shall not be considered an assignee or licensee of the Participant, as a result of reserved Government rights. The indemnity set forth in the paragraph shall apply only if the Participant shall have been informed as soon and as completely as practical by the Government of the action alleging such claim and shall have been given an opportunity, to the maximum extent afforded by applicable laws, rules, or regulations, to participate in and control its defense, and the Government shall have provided all reasonably available information and reasonable assistance requested by the Participant. No settlement for which the Participant would be responsible shall be made without the Participant's consent unless required by final decree of a court of competent jurisdiction.

ARTICLE VII. RIGHTS IN GENERATED INFORMATION

A. Right to Use

The Parties agree that they shall have no obligations of nondisclosure or limitations on their use of, and the Government shall have unlimited rights in, all Generated Information produced and information provided by the Parties under this CRADA, except for information which is disclosed in a Subject Invention disclosure being considered for patent protection, or marked as being copyrighted, Protected CRADA Information or Proprietary Information.

B. Copyrighted Works

For Generated Information, the Government retains for itself and others acting on its behalf, a royalty-free, non-transferable, non-exclusive, irrevocable worldwide copyright license to reproduce, prepare derivative works, distribute copies to the public, and perform

publicly and display publicly, by or on behalf of the Government, all copyrighted works produced in the performance of this CRADA, subject to the restrictions this CRADA places on publication of Proprietary Information and Protected CRADA Information.

B. Copyright Rights (Alternate)

The express written agreement of the Laboratory Director is required to establish a claim to copyright subsisting in any Generated Information first produced in the performance of this CRADA.

ARTICLE VIII. OBLIGATIONS AS TO PROPRIETARY INFORMATION

- A. If Proprietary Information is orally disclosed, it shall be identified as such at the time of disclosure and confirmed in a written summary thereof within ten (10) days as being Proprietary Information of the provider.
- B. Except as may otherwise be agreed to in writing by the provider, the Parties agree to use Proprietary Information only in the performance of this CRADA and to not further disclose such information to others, except to Government employees who are subject to the statutory provisions against disclosure of confidential information set forth in the Trade Secrets Act (18 USC 1905).
- C. The Parties will mark Proprietary Information with the following legend: "PROPRIETARY INFORMATION - NOT AVAILABLE FOR DISSEMINATION."
- D. All Proprietary Information shall be returned to the provider thereof at the conclusion of this CRADA at the provider's expense or otherwise disposed of by mutual agreement of the Parties.
- E. All Proprietary Information shall be protected, unless and until such Proprietary Information shall become publicly known without the fault of the recipient, shall come into recipient's possession without breach of any of the obligations set forth herein by the recipient, or shall be independently developed by recipient's

employees who did not have access to Proprietary Information, is intentionally released by the disclosing Party to a third party without restriction, or is released for disclosure with the written consent of the disclosing Party.

- F. Attachment B contains a listing of the Proprietary Information which the Participant has identified at the time of signing the CRADA as necessary to provide to NETL in order to perform the work identified under this CRADA. Introduction of any additional Proprietary Information shall be by mutual agreement of the Parties.

ARTICLE IX. OBLIGATIONS AS TO PROTECTED CRADA INFORMATION

- A. Each Party may mark as Protected CRADA Information, as defined in Article I, any Generated Information produced by its employees, and with the agreement of the other Party, mark any Generated Information produced by the other Party's employees.
- B. The Parties will mark the cover of any document containing Protected CRADA Information with the following legend:

"PROTECTED CRADA INFORMATION

THIS DOCUMENT CONTAINS PROTECTED CRADA INFORMATION WHICH WAS PRODUCED ON _____ [DATE] UNDER CRADA NO.06-N___ AND IS NOT TO BE FURTHER DISCLOSED FOR A PERIOD OF _____ [NOT TO EXCEED 5 YEARS] FROM THE DATE IT WAS PRODUCED EXCEPT AS EXPRESSLY PROVIDED FOR IN THE CRADA."

In addition, the Parties will mark each page of the document with the following legend: "PROTECTED CRADA INFORMATION."

- C. For a period of _____ [NOT TO EXCEED 5 YEARS] from the date Protected CRADA Information was produced, the Parties agree not to further disclose such Information except:

(1) as necessary to perform this CRADA;

- (2) as provided in Article XI (Reports and Abstracts);
- (3) to be provided to other DOE facilities with the same protection in place;
- (4) to existing or potential licensees, affiliates, customers, or suppliers of the Parties in support of commercialization of the technology with the same protection in place. Disclosure of the Participant's Protected CRADA Information under this subparagraph shall only be done with the Participant's consent; or
- (5) as otherwise mutually agreed to by the Parties in advance.

D. The obligations in paragraph C above shall end sooner for any Protected CRADA Information which becomes publicly known without fault of either Party, comes into a Party's possession without breach by that Party of the obligations of paragraph C above, or is independently developed by someone who did not have access to the Protected CRADA Information.

ARTICLE X. EXPORT CONTROL

THE PARTIES UNDERSTAND THAT MATERIALS OR INFORMATION RESULTING FROM THE PERFORMANCE OF THIS CRADA MAY BE SUBJECT TO EXPORT CONTROL LAWS AND THAT EACH PARTY IS RESPONSIBLE FOR ITS OWN COMPLIANCE WITH SUCH LAWS.

ARTICLE XI. REPORTS AND ABSTRACTS

- A. The Parties agree to produce the following deliverables:
- (1) an initial abstract suitable for public release at the time the CRADA is approved by DOE;
 - (2) other abstracts (substantial changes in scope and dollars occur);
 - (3) a final report, upon completion or termination of this CRADA, to include a list of subject inventions;

- (4) computer software in source and executable object code format as defined within the Statement of Work or elsewhere within the CRADA documentation.
- B. The Participant agrees to provide the above information to DOE who will provide the information to the DOE Office of Scientific and Technical Information.
- C. Any reports properly marked with a restrictive legend identifying the agreed-to period of withholding from public disclosure shall be used by the DOE for Department use only and shall be asserted to be exempt from the Freedom of Information Act as set forth at 5 U.S.C. 552.

ARTICLE XII. PRE-PUBLICATION APPROVAL

The Parties agree to secure pre-publication approval of any information to be published as a result of this CRADA other than that contained in the public abstract called for in Article XI. Such approval shall not be unreasonably withheld or denied. Failure to receive written response within thirty (30) calendar days from the date the document is received for review shall be considered by the requesting Party as pre-publication approval.

ARTICLE XIII. REPORTING SUBJECT INVENTIONS

- A. The Parties agree to disclose to each other through the Administrative Contact listed in Article XXVII every Subject Invention that may be patentable or otherwise protectable under the Patent Act within two (2) months, or such longer period as is reasonably required, after the inventor first discloses the invention in writing to the person(s) responsible for patent matters of the disclosing Party.
- B. Disclosure shall be in such detail as to be capable of enabling one skilled in the art to make and use the invention under 35 U.S.C. 112. The disclosure shall also identify any statutory bar that may exist and there shall be a continuing obligation on the Parties to further disclose any statutory bar that occurs for an invention disclosed but for which a patent application

has not been filed. All invention disclosures shall be marked and treated as confidential under 35 U.S.C. 205.

- C. The Parties agree to require, by written agreement, that their employees disclose each Subject Invention made under this CRADA promptly in writing to personnel responsible for patent matters. Further, the Parties agree that they will require their employees to execute or have executed and promptly deliver all instruments necessary for the filing and obtaining of patent protection on any Subject Invention.

ARTICLE XIV. RIGHTS TO SUBJECT INVENTIONS

- A. Each Party shall have the first option to retain title to any Subject Invention solely made by its employees during the work under this CRADA. For joint Subject Inventions made by the DOE and the Participant, the Participant shall have the option of electing to retain title to its undivided rights and, if this option is elected, title to such Subject Inventions shall be jointly owned by the DOE and the Participant.
- B. The Participant acknowledges that the DOE may obtain title to each Subject Invention reported under Article XIV for which a patent application or applications are not filed pursuant to Article XVI and for which any issued patents are not maintained by any Party to this CRADA.
- C. The Parties acknowledge that the Government retains a nonexclusive, nontransferable, irrevocable, paid-up license to practice or to have practiced for or on behalf of the United States every subject invention under this CRADA throughout the world. The Parties agree to execute a Confirmatory License to affirm the Government's retained license.
- D. The Participant shall have the option to choose an exclusive license for [*SPECIFY THE PRE-NEGOTIATED FIELD OF USE*] for any patents or patent applications made in whole or in part by employees of DOE/NETL under this CRADA. This option shall only be available to the Participant for a period of twelve months after the DOE reports the invention to the Participant or such longer time as may be approved by DOE. The Parties agree to negotiate in good faith to enter a separate mutually agreeable license agreement, including reasonable compensation, commercialization milestones, a U.S.

Competitiveness Clause, March-in Provisions and other reasonable terms and conditions. If such license agreement is not completed within one year of initiation of good faith negotiations, the Government reserves the right to grant licenses to others in any and all possible applications.

ARTICLE XV. FILING PATENT APPLICATIONS

- A. If the Participant elects to take title in any Subject Invention under Article XIV above, the Participant shall have the first opportunity to file U.S. and foreign patent applications; but if the Participant does not file such applications within twelve months after disclosure or 60 days prior to any statutory bar to patentability, whichever is earlier, then the Government may file patent applications and the Participant shall convey title in such Subject Inventions to the Government.
- B. If the Participant does not desire to file a patent application in any country in which it has the right to file for any Subject Invention, it shall notify DOE Administrative Contact listed in Article XXVII in writing of such negative intent within twelve (12) months after the initial disclosure of such invention but not later than 60 days prior to the time when any statutory bar might foreclose filing of a U.S. patent application.

ARTICLE XVI. COST OF INTELLECTUAL PROPERTY PROTECTION

Each Party shall be responsible for payment of all costs relating to copyright filing, U.S. and foreign patent application filing and prosecution, and all costs relating to maintenance fees for U.S. and foreign patents hereunder which are owned by that Party.

ARTICLE XVII. REPORTS OF INVENTION USE

The Participant agrees to submit, upon request of DOE, a non-proprietary written report no more frequently than annually on its efforts to obtain commercial utilization of any Subject Invention to which the Participant holds title.

ARTICLE XVIII. DOE MARCH-IN RIGHTS

The Participant acknowledges that the DOE has certain march-in rights to any Subject Inventions in accordance with 48 CFR 27.304-1(g) and 15 U.S.C. 3710a(b)(1)(B) and (C).

For Subject Inventions made solely by the Participant and for assignments and exclusive licenses by the Government to the Participant in Subject Inventions made in whole or in part by the Government, the DOE shall retain the right to require the Participant to grant a responsible applicant a nonexclusive, partially exclusive, or exclusive license to use the invention in any field of use, on terms that are reasonable under the circumstances, or if the Participant fails to grant such a license, to grant the license itself. DOE may exercise this right only in exceptional circumstances and only if DOE determines that (1) the action is necessary to meet health or safety needs that are not reasonably satisfied by the Participant; (2) the action is necessary to meet the requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Participant; or (3) the Participant has failed to comply with the provisions of Article XIX of this CRADA.

ARTICLE XIX. U.S. COMPETITIVENESS

The Parties agree that a purpose of this CRADA is to provide substantial benefit to the U.S. economy.

In exchange for the Benefits received under this CRADA, the Parties therefore agree to the following:

- A. Products embodying Intellectual Property developed under this CRADA shall be substantially manufactured in the United States; and
- B. Processes, services, and improvements thereof which are covered by Intellectual Property developed under this CRADA shall be incorporated into the Participant's manufacturing facilities in the United States either prior to or simultaneously with implementation outside the United States. Such processes, services, and improvements, when implemented outside the U.S., shall not result in reduction of the use of the same processes, services, or improvements in the United States.

ARTICLE XX. ASSIGNMENT OF PERSONNEL

- A. It is contemplated that each Party may assign personnel to the other Party's facility to participate in or observe the research to be performed under this CRADA. Such personnel shall not during the period of such assignments be considered employees of the host Party for any purposes, including but not limited to any requirements to provide workers' compensation, liability insurance coverage, payment of salary or other benefits, or withholding of taxes.
- B. Notwithstanding the foregoing, the host Party shall have the right to exercise routine administrative and technical oversight of the occupational activities of such personnel during the assignment period and shall have the right to approve the assignment of personnel or request their removal. The assigning Party's employees and agents shall observe the working hours, security and safety rules, and holiday schedule of the host Party while working on the host Party's premises.
- C. Unless otherwise agreed to by the Parties, the assigning Party shall bear any and all costs and expenses with regard to its personnel assigned to the host Party's facilities under this CRADA. The host Party shall bear facility costs of such assignments.

ARTICLE XXI. FORCE MAJEURE

No failure or omission by Participant or the Government in the performance of any obligation under this CRADA shall be deemed a breach of this CRADA or create any liability if the same shall arise from any cause or causes beyond the control of the Government or Participant as the case may be, including but not limited to the following: acts of God; acts or omissions of any government or agency thereof; compliance with requests, recommendations, rules, regulations, or orders of any governmental authority or any office, department, agency, or instrumentality thereof; fire; storm; flood; earthquake; accident; acts of the public enemy; war; rebellion; insurrection; riot; sabotage; invasion; quarantine; restriction; transportation embargoes; or failures or delays in transportation.

ARTICLE XXII. ASSIGNMENT

Any right acquired or assumed by the Participant pursuant to this CRADA is personal to it and may not be assigned or licensed without the prior written approval of the DOE.

ARTICLE XXIII. TERMINATION

Participation by NETL in this CRADA is subject to the availability of appropriated funds. This CRADA may be terminated by either Party upon 30 days written notice to the other. In the event of termination by either Party, each Party shall be responsible for its share of the costs incurred through the effective date of termination as well as its share of the costs incurred after the effective date of termination and which are related to the termination. Any confidentiality obligations of the CRADA shall survive any termination of this CRADA except under the conditions provided for in Article IX.D.

ARTICLE XXIV. RECORDS AND ACCOUNTING FOR GOVERNMENT PROPERTY

The Participant shall maintain records of receipts, expenditures and the disposition of all Government property in its custody related to the CRADA. Such records shall be subject to Government inspection.

ARTICLE XXV. PUBLICITY/USE OF NAME ENDORSEMENT

Neither Party shall use the name of the other on any product, process, or service which is directly or indirectly related to either this CRADA or any patent, license or assignment which implements this CRADA without the prior approval of the other; nor shall either Party represent that the other, by entering into this CRADA, directly or indirectly endorses any product, process or service provided, or to be provided, arising from the work done under this CRADA, by the Participant or their successors, assignees, or licensees.

ARTICLE XXVI. DISPUTES

The Parties will attempt to resolve any differences between them that may arise during the course of this CRADA. In the event that a dispute cannot be resolved between the Parties, the matter will be referred to the Doe's Board of Contract Appeals. The Board has established an Alternate Disputes Resolution (ADR) procedure which will be the first approach used in an attempt to resolve the dispute. Upon failure of the ADR process, the matter will be adjudicated by the Board using its regular contracts disputes procedure. In any event, this disputes process will not prevent either Party from terminating this CRADA in whole or in part under Article XXIII of this CRADA.

The construction, validity, performance, and effect of this agreement for all purposes shall be governed by the laws applicable to the Government of the United States.

ARTICLE XXVII. NOTICES

A. Any communications required by this CRADA shall be deemed made if mailed by postage prepaid first class U.S. Mail addressed to the Party to receive the communication as of the day of receipt of such communication by the addressee or on the date given if by verified facsimile. Address changes shall be given in accordance with this Article and shall be effective thereafter. All such communications, to be considered effective, shall include this CRADA Number.

B. The points of contact for the Parties are as follows:

NETL

Technical Contact:
[TBD]
MS [TBD]
Department of Energy
626 Cochrans Mill Road
P.O. Box 10940
3610 Collins Ferry Road
P.O. Box 880
Pittsburgh, PA 15236-0940
Morgantown, WV 26507-0880
Phone 304/285-[TBD]
FAX 304/285-4403
Phone 412/386-TBD
FAX 412/386-TBD

Administrative Contact:
R. Diane Newlon
MS E01
Department of Energy
3610 Collins Ferry Road
P.O. Box 880

Morgantown, WV 26507-0880

Phone 304/285-4086
FAX 304/285-4403

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E-mail: TBD@netl.doe.gov

Email:newlon@netl.doe.gov

Participant

Technical Contact:

Administrative Contact:

ARTICLE XXVIII. ENTIRE CRADA AND MODIFICATIONS

- A. It is expressly understood and agreed that this CRADA with its Attachments A through ?? contains the entire agreement between the Parties and that any other representations or agreements relating hereto have been merged into this document and are thus superseded in totality by this CRADA.
- B. Any agreement to materially change any terms or conditions of this CRADA or the Attachments shall be valid only if the change is made in writing, executed by the Participant and the Laboratory Director.

FOR PARTICIPANT:

FOR DOE:

BY _____
 NAME
 TITLE

BY _____
 Carl O. Bauer
 Director, NETL

DATE _____

DATE _____

- MODEL -

ATTACHMENT A

PROPERTY TO BE USED IN CRADA NO. 06-N--

PARTICIPANT -

[TO BE PROVIDED BY THE PARTICIPANT]

NETL -

[TO BE PROVIDED BY NETL]

- MODEL -

ATTACHMENT B

PROPRIETARY INFORMATION

[TO BE COMPLETED BY THE PARTICIPANT IF APPROPRIATE]