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# DOE COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS MANUAL

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**U.S. DEPARTMENT OF ENERGY**

**Office of Science and Technology Policy Analysis**

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Technology Policy Analysis

**DOE COOPERATIVE RESEARCH  
AND DEVELOPMENT AGREEMENTS MANUAL**

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1. PURPOSE. This Manual provides detailed requirements to supplement DOE O 483.1, DOE COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS, dated 1-12-01, which establishes requirements for the performance of technology transfer through the use of Cooperative Research and Development Agreements (CRADAs).
2. REFERENCE. DOE O 483.1, DOE COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS, dated 1-12-01.
3. CONTACT. Questions concerning this Manual should be addressed to the Office of Science and Technology Policy Analysis at 202-586-3900.

BY ORDER OF THE SECRETARY OF ENERGY:



T.J. GLAUTHIER  
Deputy Secretary

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## **DOE COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS MANUAL**

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1. **INTRODUCTION.** The purpose of this Manual is to provide practical guidelines that will expedite the Cooperative Research and Development Agreement (CRADA) process. The Manual provides detailed information on Department of Energy (DOE) approval requirements and processing guidelines. This information has been developed to promote consistency among sites entering into CRADAs.
  
2. **DEFINITIONS.**
  - a. **Amendment.** A change to a DOE-approved Joint Work Statement (JWS)/CRADA document.
  
  - b. **Funds-In.** Monies provided by a participant(s) to a DOE contractor for a CRADA project.
  
  - c. **In-Kind Contributions.** Noncash contributions provided by the participant or contractor. In-kind contributions must include collaboration in the research and development efforts of the CRADA and may also include personal property (equipment and supplies), capital equipment, work to be performed at either party's facilities, real property, or services that are directly beneficial, specifically identifiable, and necessary for performance of the project. In-kind contributions generally do not include work performed prior to execution of the CRADA.
  
  - d. **Joint Work Statement.** A proposal prepared for a Federal agency by the director of a Government-Owned, Contractor-Operated facility (or his/her delegate) describing the purpose, scope, schedule, and estimated cost of a proposed CRADA; assigning responsibilities among the agency, contractor, and any other party or parties to the proposed agreement; and, to the extent known, assigning rights among the various parties.
  
3. **JWS/CRADA PROCESS.** The JWS is intended to be the primary tool for ensuring that the contractor and DOE have a common understanding of the purpose, scope, schedule, and cost of work for a CRADA. DOE's approval of a JWS sets the parameters within which the contractor may negotiate the CRADA. A JWS must be approved before a CRADA can be approved by DOE.

The DOE field program manager will review the JWS for compliance with Federal and agency regulations and guidelines. All issues and problems will be identified and resolved prior to approval. Appendix A, Joint Work Statement Format, presents the DOE JWS format to be

used for all CRADAs. This format is also to be used by contractors when developing multi-laboratory CRADAs. The Statement of Work approved in the JWS will be made an attachment to the CRADA. This JWS format may be supplemented by local field offices.

The Modular CRADA (Appendix B, DOE Modular Cooperative Research and Development Agreement) contains the approved language to be used in a CRADA. Once a CRADA has been approved, any amendment to the CRADA, other than a no-cost extension, requires DOE approval. The mechanics for the approval of such an amendment shall be developed by the cognizant field office and should be consistent with this Manual. It is recognized that there are other models that have been developed through appropriate entities in DOE. These include the Short Form CRADA and the USIC CRADA models. If there is any question as to the validity of other models, consult with the Assistant General Counsel for Technology Transfer and Intellectual Property.

#### 4. TECHNOLOGY TRANSFER NOTIFICATIONS FOR UNUSUAL CIRCUMSTANCES.

- a. Background. DOE and its laboratory system are involved in large numbers of technology transfer activities. Most proceed smoothly and significantly benefit the Department, the private sector, and the nation as a whole. Some activities result in exceptional success, which DOE may want to promote. Other activities involve unusual circumstances (real or perceived issues that can attract significant attention), which need to be communicated to higher levels in DOE management.
- b. Notification Process. When concern arises about unusual circumstances in an existing or proposed CRADA activity, the operations/field office will notify the appropriate Secretarial Officers. These include, if different, the Lead Program Secretarial Officer, Cognizant Secretarial Officer, and Program Secretarial Officer. Members of the technology transfer working group can provide advice or guidance as to whether a particular concern should be reported to a Secretarial Officer.
- c. Notification Criteria. Some notification criteria are specifically addressed in this Manual or imposed by other Orders.
  - (1) The following criteria are examples of situations that each have a well-defined notification or approval process in place which identifies when higher management must be notified.
    - (a) Modular CRADA. Deviation from the double-underlined language in the Modular CRADA standard terms, conditions, and options, and the related Modular CRADA guidance.

- (b) Multi-laboratory CRADAs. These require notification of the relevant field offices, which are responsible for ensuring coordination and resolution of any conflicting or varying terms or arrangements.
  - (c) Sensitive technologies. Projects related to sensitive technologies (as outlined in the Sensitive Subjects List available from the Nuclear Transfer and Supplier Policy Division, NN-43), nuclear applied technologies, or work involving export controlled information require the relevant approvals.
  - (d) Human or animal subject involvement.
    - 1 Human subject involvement. If the laboratory holds an assurance of compliance with human subject regulations, it may approve such activities; however, the field office must be notified. If the laboratory does not hold an assurance of compliance (either Department of Health and Human Services or DOE), the Office of Science must approve the activities.
    - 2 Animal subject involvement. If the laboratory has an institutional animal care and use committee, it may approve such activities; however, the field office must be notified. If the laboratory does not have an institutional animal care and use committee, it is not authorized to conduct research activities involving animals.
  - (e) Environment, Safety and Health and National Environmental Policy Act. Normal considerations are handled within the standard process.
- (2) For all other circumstances the judgment and experience of field office personnel is the primary determiner of when notification should occur. DOE encourages early discussion among laboratories, field offices, and program offices to make this determination. The following are examples of circumstances under which Headquarters notification might be appropriate based on field office judgment:
- (a) foreign participation and issues;
  - (b) alternative benefits to U.S. manufacturing requirements having a potential for significant impact on the U.S. economy;
  - (c) size of activity and impact on the laboratory;
  - (d) large Funds-in from the partner;

- (e) activities that may involve unique or unusual health, safety, or environmental issues or a significant real or perceived potential environmental impact;
- (f) potential for major economic impact to the relevant industrial or commercial sector or for the appearance of inappropriate competition with the private sector; and
- (g) potential for significant political or media interest or significant public or private sector controversy.

**JOINT WORK STATEMENT**

**JWS/CRADA # \_\_\_\_\_**

<b>{Project Title}</b> <b>{Submittal Date}</b>
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**A. Data Table**

1. Summary/OSTI Abstract

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2. Participant(s) Name and Address

(NAME)  
(Mailing or Street Address)  
(City, State, Zip)  
(Telephone Number)

(NAME)  
(City, State, Zip)  
(Telephone Number)

3. Participant Type (check all that apply)

	Participant One	Participant Two
Foreign	G	G
University	G	G
Small Business	G	G
Large Business	G	G
State or Local Government	G	G
Not-for-Profit	G	G
National Laboratory	G	G

4. Funding Table

Funding Type	Year 1		Year 2		Year 3		Totals
	Funds-in	*In-kind	Funds-in	*In-kind	Funds-in	*In-kind	
Participant 1							
Participant 2							
Dept. of Energy							
Totals							
Federal Admin Charge if applicable							

*\*Note: If applicable, the contractor has reviewed the participant(s) proposed in-kind contribution and based on **G** experience, **G** financial analysis, and/or **G** sound business judgment has determined the estimated in-kind contribution(s) is/are reasonable.*

- Identify the DOE mission area (**G** Energy, **G** Environmental Quality, **G** Science, **G** National Security, **G** Other) that will benefit from this CRADA. If other, please explain.
- How does the proposed CRADA benefit DOE, Participant, and U.S. Taxpayer? (Some facilities require textual explanation; others provide a checklist for each stakeholder. An example follows.)

**EXAMPLE:**

**DOE Benefit:** **G** Assists laboratory achieve programmatic scope, **G** adds new capability to the laboratory's core competencies, **G** enhances the laboratory's core competencies, **G** uses the laboratory's core competencies, and/or **G** enhances U.S. competitiveness by utilizing DOE-developed intellectual property and/or capabilities.

- DOE Program Manager

\_\_\_\_\_  
Telephone No.

- B&R Code and/or FWP Number

- The Proposed CRADA will be based upon **G** Modular CRADA, **G** Short Form CRADA, **G** Multilab CRADA, **G** USIC, **G** other (identify)\_\_\_\_\_.

**B. Special Considerations**

1. Background Intellectual Property (e.g., inventions or copyrightable software, etc.)?  
 Yes  No  
If yes, list (1) \_\_\_\_\_  
(2) \_\_\_\_\_  
(3) \_\_\_\_\_
  
2. Is the company interested in licensing Background Intellectual Property?  Yes  No  
Please identify any known impediments for such licensing. \_\_\_\_\_
  
3. Are human or animal subjects involved in this project?  Yes  No  
*(If yes, before the CRADA can be executed, approvals must be obtained from the Institutional Review Board or the Animal Care and Use Committee.)*
  
4. Have all necessary environmental, safety, health and quality (NEPA) reviews been satisfactorily completed?  Yes  No (explain)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
5. The laboratory is responsible for obtaining OCI Certificates and will maintain in the file the completed OCI Certificates for each employee with a substantial role in this CRADA. Are there any organizational or personal conflict of interest issues associated with this CRADA?  
 Yes (explain)  No  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
6. Will export controlled and classified information be used or produced?  Yes  No  
If yes, identify.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
7. How was Fairness of Opportunity determined?  Participant approached laboratory  
 Participant responded to CBD  Participant was contacted by laboratory after or during broad public announcement. *(Supporting documentation is to be maintained in CRADA file.)*
  
8. Did the Participant require any substantive/material changes to the laboratory-/field-approved modular CRADA and/or any changes to double-underlined language?  Yes  No  
If yes, attach copies of the proposed modified articles, and (if applicable) Participant's U.S. Competitiveness worksheet/justification. If requested by the Contracting Officer, the Contractor will provide justification for modified articles in writing.

9. **Additional Notes:** If applicable, identify special considerations or comments.

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*If applicable, add approval signature blocks for DOE and the Contractor.*

**DOE-APPROVED COOPERATIVE RESEARCH AND  
DEVELOPMENT AGREEMENT LANGUAGE AND GUIDANCE**

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The Modular Cooperative Research and Development Agreement (CRADA) was developed to promote consistency throughout the Department of Energy (DOE). The Modular CRADA presents DOE-approved language, approved optional language, and guidance for each article.

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## Introduction

This document, to be referred to as the Department of Energy (DOE) Modular Cooperative Research and Development Agreement (CRADA), is a compendium of provisions which may be drawn upon for crafting CRADAs. It was developed to be responsive to the needs of different CRADA participants while protecting the interests of the Government and U.S. taxpayers. The Modular CRADA is a tool to be used by DOE and its Government-Owned, Contractor-Operated laboratories (hereafter referred to as laboratories) to facilitate the negotiation, development, and timely approval of CRADAs.

This Modular CRADA incorporates three types of provisions:

1. Those few that are required by statute or policy, (set off by double underline) are strongly recommended for timely approval, and can only be changed with DOE Headquarters approval. Changing double-underlined language or examples may delay the process. Double-underlined language can be eliminated where it doesn't apply.
2. Those that sound judgment suggests have a valid basis for being included in the terms and conditions of the CRADA, consistent with the guidelines incorporated herein. These can be modified in one of three ways:
  - by using the pre-approved options provided in the guidance;
  - by modifying the language without changing its substantive meaning; and
  - by negotiating the language that changes its substantive meaning, or even deleting the language with appropriate justification; in each of these two instances, operations or field office approval is required.
3. Those that are left solely to the negotiations between the laboratory and the participants.  
[Shown in brackets.]

Through a spirit of teamwork and a policy of “no surprises,” this document should enable DOE and its laboratories to be responsive to a broad range of participant needs. This approach is intended to convey the maximum flexibility in CRADA development, and in speed of negotiations and approval, while fostering consistency across DOE and its laboratories.

In drafting a CRADA from the options provided in the Modular CRADA, the laboratory should be careful not to create internal conflicts within the agreement. The draft CRADA should still follow the form (i.e., order of provisions) of the DOE Modular CRADA in order to facilitate operations or field office review and approval.

In this document, the format for presenting the various provisions of the CRADA will consist of:

- a statement of the article, with language required by statute or policy double underlined;
- a rationale for the article; and
- pre-approved optional provisions for the article (set off inside a box).

Example:

Article 1 (Title)

- Required provisions (if any)
  - rationale or basis for requirement
- Pre-approved optional provisions (if any)
  - rationale/appropriate circumstances
- Pre-approved optional provisions #2
  - rationale/appropriate circumstances
- Bracketed provisions
  - rationale/explanation or  
General Guidance

## **Negotiating and Approving CRADAs**

By law and through prime contract provisions, the laboratories have been delegated the authority and responsibility for negotiating the CRADA, including a Statement of Work. In exercising that authority, laboratories need to strike a balance between consistency and flexibility.

To the extent the negotiated CRADA uses language that does not deviate from the double-underlined provisions and uses the pre-approved optional provisions, the operations or field office review and approval of the CRADA will be faster.

Operations or field offices are the approval authority for Joint Work Statements (JWSs) and CRADAs. To facilitate operations or field office review, laboratories should identify all deviations from the double-underlined provisions or pre-approved optional provisions when the CRADA is submitted for approval. Laboratories should submit to the operations or field office two versions of the proposed CRADA—one in which all deviations from the Modular CRADA provisions are highlighted using “redline” and “strikeout” features, and one that is a “clean” version. All deviations that are considered by the laboratories to be substantive should be supported by appropriate justification. The field office may approve deletion of provisions including double-underlined provisions which are inapplicable to a particular CRADA. DOE Headquarters must approve any deviation from the double-underlined provisions. The operations or field office will transmit any proposed deviations from the double-underlined language and the reasons for the requested deviations to the DOE Office of the Assistant General Counsel for Technology Transfer and Intellectual Property. That office will confer with the

appropriate elements in Headquarters to determine if the requested deviation is acceptable and will inform the operations or field office of the Headquarters determination. Any deviations from the pre-approved optional provisions, except deviations from double-underlined language which must be approved by Headquarters, must be reviewed and approved by the operations or field office. Approval of the changes from the pre-approved optional provisions, which the operations or field office agrees are nonsubstantive, may be reflected merely by approval of the CRADA. For substantive changes, specific approval in the form of a notation on the “redline” version or other supporting documents will suffice. Any operations or field office requests for the laboratory to modify the CRADA must comply with the requirements of 15 U.S.C. 3710a(c)(5)(C).

While available for consultation to both the laboratory and the prospective participant, the operations or field office should refrain from becoming a third party to the negotiations. Each operations or field office is encouraged to designate a single point of contact to facilitate its CRADA review and approval process. Like operations or field offices, program offices and others should refrain from becoming a third party to the negotiations between the laboratory and the prospective participant.

### **The Importance of Teamwork and Communication**

To use this document effectively, close cooperation and communication between the laboratory and DOE is essential. Issues that can be foreseen as key issues, especially critical departures from pre-approved language, should be discussed as early in the development process as possible. There should be a minimum of surprises. The laboratory and DOE should be open to proposed changes from participants that could help the negotiation process and do not infringe upon the Government’s rights or laboratory policy. When alternative language is clearly called for, it should be used. One of the objectives of this document is to provide pre-approved alternative language for a variety of situations, as well as guidance and rationale for using that alternative language.

The DOE Modular CRADA will be updated on a routine basis to incorporate new language and alternatives, based on input from the participants, laboratories, operations or field offices, and DOE programs. Laboratory staff with proposed updates should contact their operations or field office; operations or field office staff with proposed updates should contact the DOE Office of the Assistant General Counsel for Technology Transfer and Intellectual Property.

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**TITLE OF CRADA**

**LANGUAGE:**

*STEVENSON-WYDLER (15 U.S.C. 3710)  
COOPERATIVE RESEARCH AND DEVELOPMENT  
AGREEMENT (hereinafter "CRADA") No. \_\_\_\_\_*

*BETWEEN*

\_\_\_\_\_  
*under its U.S. Department of Energy Contract*

*No. \_\_\_\_\_ (hereinafter "Contractor")*

*AND*

\_\_\_\_\_  
*(hereinafter "Participant"),*

*both being hereinafter jointly referred to as the "Parties."*

**GENERAL GUIDANCE:**

The CRADA number and names of the Parties to the CRADA must be included in the CRADA immediately preceding Article I, Definitions.

## ARTICLE I: DEFINITIONS

### LANGUAGE:

- A. *“Government” means the Federal Government of the United States of America and agencies thereof.*
- B. *“DOE” means the Department of Energy, an agency of the Federal Government.*
- C. *“Contracting Officer” means the DOE employee administering the Contractor’s DOE contract.*
- D. *“Generated Information” means information produced in the performance of this CRADA.*
- E. *“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 which is marked as Proprietary Information.*

(based on 15 U.S.C. 3710a(c)(7)(A))

### OPTION:

- E. *“Proprietary Information” means information which is developed at private expense outside of this CRADA, is marked as Proprietary Information, and 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)).*

**GUIDANCE:** Alternative language, which may be used if desired.

- F. *“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.*

(based on 15 U.S.C. 3710a(c)(7)(B))

G. *“Subject Invention” means any invention of the Contractor or Participant conceived or first actually reduced to practice in the performance of work under this CRADA.*

(based on 35 U.S.C. 201(e))

H. *“Intellectual Property” means Patents, Trademarks, Copyrights, Mask Works, Protected CRADA Information, and other forms of comparable property rights protected by Federal law and foreign counterparts, except trade secrets.*

**OPTION:**

H. *“Intellectual Property” means Patents, Copyrights, Trademarks, and Mask Works protected by Federal law and foreign counterparts, except trade secrets.*

**GUIDANCE:** Alternative language, which may be used if desired.

I. *“Trademark” means a distinctive mark, symbol, or emblem used in commerce by a producer or manufacturer to identify and distinguish its goods or services from those of others.*

J. *“Service Mark” means a distinctive word, slogan, design, picture, symbol, or any combination thereof, used in commerce by a person to identify and distinguish its services from those of others.*

K. *“Mask Work” means a series of related images, however fixed or encoded, having or representing the predetermined, three-dimensional pattern of metallic, insulating, or semiconductor material present or removed from the layers of a semiconductor chip product and in which series the relation of the images to one another is that each image has the pattern of the surface of one form of the semiconductor chip product.*

(from 17 U.S.C. 901(a)(2)).

L. *“Background Intellectual Property” means the Intellectual Property identified by the Parties in Appendix \_\_, Background Intellectual Property, which was in existence prior to or is first produced outside of this CRADA, except that in the case of inventions in those identified items, the inventions must have been conceived outside of this CRADA and not first actually reduced to practice under this CRADA to qualify as Background Intellectual Property.*

[When the need for a foreign ownership, control, or influence (FOCI) review has been determined to exist and where Article X, Export Control, has been appropriately modified, the following definitions should be added:]

M. *“Foreign Interest” is defined as any of the following:*

- (1) *A foreign government or foreign government agency;*
- (2) *Any form of business enterprise organized under the laws of any country other than the United States or its possessions;*
- (3) *Any form of business enterprise organized or incorporated under the laws of the United States, or a State or other jurisdiction within the United States, which is owned, controlled, or influenced by a foreign government, agency, firm, corporation or person; or*
- (4) *Any person who is not a U.S. citizen.*

N. *“Foreign ownership, control, or influence (FOCI)” means the situation where the degree of ownership, control, or influence over a participant by a foreign interest is such that a reasonable basis exists for concluding that compromise of classified information or special nuclear material, as defined in 10 CFR Part 710, may result.*

#### **GENERAL GUIDANCE:**

A definition section must include definitions for DOE Contracting Officer, DOE, Generated Information, Subject Invention, and any other terms that would be used in the CRADA. If the CRADA is expected to involve Proprietary Information being furnished and/or Protected CRADA Information being generated, these definitions must be included.

The definition for Background Intellectual Property may not be all-inclusive (e.g., pre-existing invention disclosures or unregistered copyrighted software). It is essential that the existence of this additional Background Intellectual Property be brought to the attention of the other party before the CRADA is signed. This can be done by either changing the definition or by using a separate article on Background Intellectual Property (see article on page 88) to recognize such Background Intellectual Property. Additionally, it should be made clear either in an appendix listing Background Intellectual Property or in one of the separate articles on Background Intellectual Property, if used, that the only Background Intellectual Property that need be identified is that necessary to perform the CRADA or practice the results of the CRADA, as appropriate.

If a defined term is not relevant for a particular CRADA, the definition may be deleted so long as the relevant provisions are appropriately modified (i.e., if the Statement of Work does not contemplate the

creation of mask works, Article XVIII should be reserved by so indicating in [brackets] and the definition of mask works should be deleted from the definition section. This will avoid the need to renumber all of the articles after Article XVII.) The parties may incorporate additional definitions into the CRADA. An example of a common definition that may be needed is the following:

- “CRADA” means a Cooperative Research and Development Agreement.

## **ARTICLE II: STATEMENT OF WORK**

### **LANGUAGE:**

*Appendix \_\_, Statement of Work, is an integral part of this CRADA.*

### **OR**

*The Statement of Work is attached as Appendix \_\_.*

### **GENERAL GUIDANCE:**

The CRADA must include a Statement of Work. The Statement of Work must include a technical description of the scope encompassed by the proposed CRADA, including tasks, the party responsible for the tasks, and a list of deliverables (reports, prototypes, etc.). The Statement of Work should also include who the principal investigators for each party will be; who will provide what funds, personnel, services, and property; who will do what reporting on the work; and procedures for interaction between the parties to accomplish the Statement of Work, which is the objective of the CRADA. Any Proprietary Information included in the Statement of Work should be clearly marked. Proprietary Information must not be included in the Statement of Work unless the parties consider it absolutely necessary to define the work. The name of the participant cannot be considered proprietary.

### ARTICLE III: TERM, FUNDING AND COSTS

#### LANGUAGE:

- A. *The effective date of this CRADA shall be the latter date of (1) the date on which it is signed by the last of the Parties or (2) the date on which it is approved by DOE. The work to be performed under this CRADA shall be completed within \_\_\_\_ months/years from the effective date.*

#### OPTION:

- A. *The effective date of this CRADA shall be the latter date of (1) the date on which it is signed by the last of the Parties, (2) the date on which it is approved by DOE, or (3) the date on which the advance funding referred to in Article III.E is received by the Contractor. The work to be performed under this CRADA shall be completed within \_\_\_\_\_ months/years from the effective date.*

**GUIDANCE:** This option should be used for CRADAs which have funds to the Contractor from the participant.

- B. *The participant's estimated contribution is \$\_\_\_\_. The Government's estimated contribution, which is provided through the contractor's contract with DOE, is \$\_\_\_\_, subject to available funding.*

(based on 31 U.S.C. 1341(a)(1): Anti-Deficiency Act, as well as Departmental policy)

#### OPTION FOR 100% FUNDS-IN CRADAS:

- B. *The Participant's estimated contribution is \$ \_\_\_\_\_ .*

**GUIDANCE:** Language which may be used for 100% funds-in CRADAs.

- C. *Neither Party shall have an obligation to continue or complete performance of its work at a contribution in excess of its estimated contribution as contained in Article III.B, above, including any subsequent amendment.*
- D. *Each Party agrees to provide at least \_\_\_\_ days' notice to the other Party if the actual cost to complete performance will exceed its estimated cost.*

**OPTION:**

*D. Notification to all Parties that actual costs will substantially exceed estimated costs shall be provided by any Party who makes such determination. Such notification shall take place as soon as possible after making such determination, but not later than 30 days prior to termination based on such cause. If the Parties mutually agree to continue the project, subject to Article XXIX [ENTIRE CRADA AND MODIFICATIONS], the estimated cost shall be appropriately amended and the Parties shall agree on the share of each Party of such increase in estimated cost by duly executed amendments to this CRADA.*

**GUIDANCE:** Alternative language, which may be used if desired. This is a management tool to catch large deviations. It is not intended that this option would come into play for minor deviations from estimated cost.

[*E. For CRADAs which include (non-Federal) funding on a funds-in basis, an advance payment provision will be negotiated consistent with current DOE policy.*]

The following examples represent a range of alternative advance payment provisions that can be used for paragraph E if necessary. They are all consistent with current DOE policy on requiring advance payments, as elaborated in the DOE Acting Chief Financial Officer's memorandum of August 4, 1992, "Guidance on Advance Funding Under Cooperative Research and Development Agreements (CRADAs)." Some of these options are appropriate only for specific types of participants.

**OPTION 1:** Recommended provision to be used for most participants, where the work is greater than \$25,000 and will last longer than 90 days. Advance payments in this option are to be calculated on a 90-day basis.

*E. The Participant shall provide Contractor sufficient advance funds to maintain approximately a 90-day advance of funds during the entire period of work. No work will begin before the receipt of a cash advance. Failure of the Participant to provide the necessary advance funding is cause for termination of the CRADA.*

**OPTION 2:** Where the participant's contribution in direct funds to the contractor is \$25,000 or less or where the work will be completed in 90 days or less:

*E. The Participant shall provide Contractor full funding prior to beginning work covered by those funds.*

**OPTION 3:** For small businesses that are unable to meet the 90-day advance payment requirement, the contractor may negotiate a shorter time period (applicable to Option 1 above).

**OPTION 4:** The contractor performing the work may elect to provide the advance funding from its award/management fees, royalties, or other non-Federal corporate funds.

**OPTION 5:** Recommended provision when it is not feasible for certain participants to provide a cash advance who cannot fulfill the advance payment requirements of Options 1 or 2 (only for a small or disadvantaged business currently not in a position to lose interest on advanced funds for an extended period of time). Refer to the DOE Accounting Handbook, Chapter 13, paragraph 5b for appropriate instructions for accounting procedure for this option.

*E. Upon execution of this CRADA, the Participant shall have established an irrevocable trust or escrow account. The balance in this account must be maintained at a level equivalent to approximately a 90-day advance of funds during the life of the CRADA. Accrued costs and commitments of the Participant shall not exceed the balance in the trust or escrow account plus the payments received from the Participant.*

**OPTION 6:** For State or local governments with a statute or other legal prohibition to advancing funds, no advance funding provision is required. Refer to the DOE Accounting Handbook, Chapter 13, paragraph 5b for appropriate instructions for accounting procedures for this option.

#### **GENERAL GUIDANCE:**

In accordance with DOE O 483.1, DOE COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS, each CRADA must provide a benefit consistent with the program missions at the facility and the facility mission established by the Cognizant Secretarial Officer and must involve collaboration between the CRADA participant and the DOE laboratory.

There must be a statement of funding for the CRADA, showing the estimated contributions of the parties. The statement must clearly state that the Government's estimated contribution is provided

through the contractor's contract with DOE and is subject to available funding, except for 100% funds-in CRADAs, for which there is no Government contribution. The statement may indicate that the participant's contributions are also subject to availability of funds and should include provisions that describe the obligations of the parties relative to exceeding the estimated costs.

The statement of funding must include a provision addressing advance payment requirements whenever there are "funds-in" from the participant. The contractor may not agree to waive advance payments unless the contractor is using its own funds (e.g., from royalties). The contractor may, however, negotiate variations to the standard advance payment requirement for small businesses and others, consistent with DOE policy and financial guidance. Several example clauses are provided above.

The parties may also wish to set forth levels of commitment to the CRADA, in terms of full-time equivalent numbers of various staff and personnel classifications.

Program officers and Cognizant Secretarial Officers may provide supplemental guidance on funding and other issues to the contractor and operations or field office to help avoid surprises and ensure effective coordination of CRADAs and management of multi-year resource requirements. For example, there could be specific requirements to get either written approval from, or provide written notice to, the Cognizant Secretarial Officer and/or the appropriate program office for 100% funds-in CRADAs involving more than \$1 million dollars total effort per year.

Under current DOE policy, funds previously obtained from Federal sources can be used to finance a non-Federal participant's share of a project. One of the purposes of CRADAs is to stimulate private investment in collaborations with laboratories. It is important that the overall program be supported with significant private funds. However, DOE generally is unconcerned if the funds for the participant's share of a specific CRADA come ultimately from some other Federal program, so long as the decision process for obtaining those funds precedes the final CRADA negotiation and the obtaining of those funds complies with the rules of that process. If the funds come from some other part of the Department, extra care must be taken to ensure that there is no real or apparent conflict of interest and that there is fairness of opportunity.

Other contractual obligations of the participant with respect to the Government are not overridden by this CRADA.

## ARTICLE IV: PERSONAL PROPERTY

### LANGUAGE:

*All tangible personal property produced or acquired under this CRADA shall become the property of the Participant or the Government, depending upon whose funds were used to obtain it. Such property is identified in Appendix \_\_, Statement of Work. 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.*

#### OPTION 1:

*All tangible personal property produced or acquired under this CRADA (specifically excluding Intellectual Property rights, Background Intellectual Property, and Proprietary Information) shall become the property of the Participant or the Government, depending upon whose funds were used to obtain it. Such property is identified in Appendix \_\_, Statement of Work. Personal property shall be disposed of as directed by the owner at the owner's expense. There shall not be any jointly funded property under this CRADA except by the mutual agreement of the Parties.*

**GUIDANCE:** Alternative language, which may be used if desired.

#### OPTION 2:

*Participant shall have title to any tangible personal property the Contractor produces or acquires using solely the Participant's funds under this CRADA whose cost is greater than \$5,000 (unless identified otherwise in Appendix \_\_). The Government shall have title to all other tangible personal property produced or acquired by the Contractor.*

**GUIDANCE:** Alternative language, which may be used if desired.

### GENERAL GUIDANCE:

There must be agreement among the parties as to who will retain what tangible property, if any is to be obtained, acquired, produced, or modified in the course of the CRADA. Remember that Government property disposal regulations pertain to any property in which Government money is involved.

## ARTICLE V: DISCLAIMER

### LANGUAGE:

*THE GOVERNMENT, THE PARTICIPANT, AND THE CONTRACTOR 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, THE PARTICIPANT, NOR THE CONTRACTOR SHALL BE LIABLE FOR SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES ATTRIBUTED TO SUCH RESEARCH OR RESULTING PRODUCT, INTELLECTUAL PROPERTY, GENERATED INFORMATION, OR PRODUCT MADE OR DEVELOPED UNDER THIS CRADA.*

### OPTION:

*THE GOVERNMENT, THE PARTICIPANT, AND THE CONTRACTOR 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, THE PARTICIPANT, NOR THE CONTRACTOR SHALL BE LIABLE FOR LOST PROFITS, LOST SAVINGS, SPECIAL, CONSEQUENTIAL, INCIDENTAL, OR OTHER INDIRECT DAMAGES, EVEN IF SUCH PARTY IS MADE AWARE OF THE POSSIBILITY THEREOF.*

**GUIDANCE:** Alternative language, which may be used as desired. Adds in lost profits and savings and provides that the parties are not liable for special, consequential, incidental, or other indirect damages, even if they are made aware of the possibility of such damages.

### GENERAL GUIDANCE:

There must be a disclaimer of express or implied warranties as to the conduct of the research. This statement should be in the form of a Uniform Commercial Code (UCC)-type disclaimer, which should be conspicuous in the CRADA so as to meet the standards of due notice to the parties. One way to do this is to use bold type, all capital letters, or to have an especially large type font specifying the disclaimer.

## ARTICLE VI: PRODUCT LIABILITY

### LANGUAGE:

*Except for any liability resulting from any negligent acts or omissions of the Contractor, the Participant indemnifies the Government and the Contractor 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, neither the Government nor the Contractor shall be considered assignees or licensees of the Participant, as a result of reserved Government and Contractor rights. The indemnity set forth in this paragraph shall apply only if the Participant shall have been informed as soon and as completely as practical by the Contractor and/or 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 Contractor and/or 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.*

#### **OPTION 1: Use Of Hold Harmless Provision**

As an option to using the above language for product liability, a hold harmless provision may be substituted therefor, such as the following:

*Except for any liability resulting from any negligent acts or omissions of the Contractor, the Participant agrees to hold harmless the Government and the Contractor 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.*

**OPTION 2: States and State Agencies**

When the CRADA involves a State, a State Agency, a State college or university, or a political subdivision of a State or an agency thereof, and such entity is limited by law from assuming all such indemnification obligations, the product liability article may begin with:

*To the extent permitted by {name of State} State law and except for any liability resulting from any negligent acts or omissions . . .*

As an alternative to these examples, a “hold harmless” or “disclaimer” may also be used.

When any of these provisions under Option 2 are incorporated into a CRADA, product liability indemnification by third parties must be provided using the following Option 3, appropriately modified to reflect the correct parties in interest.

**OPTION 3: ADDITIONAL CLAUSE: Indemnification by Third Party**

When the contractor retains rights to license or otherwise transfer technology arising under a CRADA, the contractor may agree to flow down to its licensees or transferees indemnification of the participant from product liability, such as with the following additional clause:

*For licenses granted or assignments made by the Contractor to any third party in Intellectual Property derived from Generated Information, such licenses shall include the requirement that the third party shall indemnify the Government, Contractor, and Participant for all damages, costs, and expenses, including attorneys’ 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 such third party, its assignees, or licensees, provided, however, such third parties shall not be required to indemnify the Participant for any negligent acts or omissions of the Participant.*

**OPTION 4: Purchase of Product Liability Insurance**

The participant or the contractor may agree to purchase and maintain adequate product liability insurance to protect the Government and the contractor against product liability claims. Product liability insurance is appropriate for CRADAs when there is a high risk of personal injury or property damage from using the product, process, or service derived from work performed under the CRADA. An example of a suitable provision is:

*The (Participant, Contractor, or Parties) agree to obtain and maintain product liability insurance in the amount of \$\_\_\_\_\_ during the life of this agreement and subsequently for the life of any products, processes, or services resulting from work under the agreement. The Government and the Contractor shall be covered against any claims for product liability as a result of this insurance. A copy of this product liability insurance policy shall be provided to both the Government and the Contractor, including any material modifications thereto, including any notices of termination.*

The cost for this insurance shall not be charged directly or indirectly to the Government.

**OPTION 5: Participant Defends**

*Participant agrees to indemnify the Government and defend the Contractor against any claim or proceeding and pay 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, neither the Government nor the Contractor shall be considered assignees or licensees of the Participant. The agreement set forth in this paragraph shall apply only if the Participant shall have been informed as soon and as completely as practical by the Contractor and/or 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 Contractor and/or the Government shall have provided all reasonable assistance requested by the Participant. No settlement of an action against the Contractor and/or the Government for which the Participant would be responsible hereunder shall be made without the consent of the Participant and of the Contractor and the Government (whichever or both of the latter two parties is involved), unless required by final decree of a court of competent jurisdiction.*

**GENERAL GUIDANCE:**

If the results of the research covered by the CRADA are restricted in any way for the purpose of commercialization (such as through patents, copyrights, or Protected CRADA Information), or if there is a specific, identifiable laboratory technology being transferred, there must be a provision that indemnifies the contractor and the Government from all costs related to personal injury and property damage that may result from the participant's commercialization and use of a product, process, or service. The protection should usually take the form of the above provision on product liability.

Special situations may provide for deletion of the language of the above product liability provision from the CRADA or may justify the use of some other provision in its place. The following are examples of special situations for which a product liability provision is not required:

- (a) When the results will be a product, process, or service unlikely to be commercialized (e.g., activity is limited to technical assistance), circumstances must be such that they justify the exclusion of the product liability indemnity provision from the agreement. Such determinations will be made on a case-by-case basis and will be supported by facts indicating there is little or no potential risk of liability to the Government or the contractor. The authority to make these determinations shall reside with the laboratory director.
- (b) When the results are to be placed totally in the public domain (i.e., no Protected CRADA Information or Intellectual Property) and accompanied by a DOE-approved disclaimer; if the purpose of the agreement is to provide information which is intended to be placed in the public domain with an appropriate disclaimer provision, a product liability provision need not be used.

In the event either of the above paragraphs (a) or (b) apply, this article should be [Reserved].

## ARTICLE VII: OBLIGATIONS AS TO PROPRIETARY INFORMATION

### LANGUAGE:

- A. *Each Party agrees to not disclose Proprietary Information provided by another Party to anyone other than the CRADA Participant and Contractor without written approval of the providing Party, except to Government employees who are subject to the statutory provisions against disclosure of confidential information set forth in the Trade Secrets Act (18 U.S.C. 1905).*

(based on a DOE policy that its employees not sign nondisclosure agreements, based on the provisions of the above-cited criminal statute)

### OPTION:

- A. *Each Party agrees not to disclose Proprietary Information provided by another Party to anyone other than the CRADA Participant and Contractor without written approval of the providing Party, except to Government employees who are subject to 18 U.S.C. 1905. To the extent that any Generated Information discloses or duplicates Proprietary Information, such Generated Information shall be marked and treated as Proprietary Information.*

*Disclosures of Proprietary Information to DOE employees shall occur only onsite at the Contractor's facilities unless mutually agreed upon by the Parties. The Contractor and DOE shall limit their respective internal disclosure of Proprietary Information to those employees or agents having a need to know such information.*

**GUIDANCE:** Alternative language, which may be used if desired.

- B. *If Proprietary Information is orally disclosed to a Party, it shall be identified as such, orally, at the time of disclosure and confirmed in a written summary thereof, appropriately marked by the disclosing Party, within \_\_\_\_\_ days as being Proprietary Information.*
- C. *All Proprietary Information shall be returned to the provider thereof at the conclusion of this CRADA at the provider's expense.*

**OPTION:**

- C. *Proprietary Information in tangible form shall be returned to the disclosing Party or destroyed with a certificate of destruction submitted to the disclosing Party upon termination or expiration of this CRADA, or during the term of this CRADA upon request by the disclosing Party.*

**GUIDANCE:** Alternative language, which may be used if desired.

- D. *All Proprietary Information shall be protected for a period of \_\_\_\_\_ years from the effective date of this CRADA, unless such Proprietary Information becomes publicly known without the fault of the recipient, shall come into recipient's possession without breach by the recipient of any of the obligations set forth herein, or is independently developed by recipient's employees who did not have access to such Proprietary Information.*

**OPTION:**

- D. *All information marked as Proprietary Information shall be protected by the recipient as Proprietary Information for a period of \_\_\_\_\_ years from the effective date of this CRADA, unless, as shown by the recipient, such Proprietary Information becomes publicly known without the fault of the recipient, comes into recipient's possession from a third party without an obligation of confidentiality on the recipient, is independently developed by recipient's employees who did not have access to such Proprietary Information, is released by the disclosing Party to a third party without restriction, or is released for disclosure with the written consent of the disclosing Party.*

**GUIDANCE:** Alternative language, which may be used, if desired.

The following paragraph may be included in this article, if desired.

- E. *In no case shall the Contractor provide Proprietary Information of the Participant to any person or entity for commercial purposes, unless otherwise agreed to in writing by such Participant.*

**GENERAL GUIDANCE:**

If Proprietary Information will be involved in the CRADA, a definition along the lines of the Freedom of Information Act (5 U.S.C. 552) and Stevenson-Wydler statute (15 U.S.C. 3710 a(c)(7)(A)) must be included in Article I, Definitions, of the CRADA, clearly indicating that Proprietary Information is “information embodying trade secrets developed outside the CRADA at private expense.” The contractor cannot negotiate away the right of a Government employee subject to 18 U.S.C. 1905 to see CRADA-related Proprietary Information. The contractor should seek additional rights to Proprietary Information at the DOE laboratory where program needs require rights greater than those prescribed in the CRADA clauses (i.e., including limiting the period in which Proprietary Information is maintained as proprietary when such information is retained by the contractor).

The obligations of the parties with regard to Proprietary Information should require that all such materials be sufficiently identified and marked such that the personnel involved in the project will have no trouble understanding what materials are to be protected. The parties should stipulate whether the contractor will return such materials, destroy them, or keep them at the end of work on the CRADA. If information could not be protected as a valid trade secret, or commercial or financial information, it should not be protected under the CRADA.

If the parties will be using software, biological materials, specimen materials, equipment, or other tangible personal property which a party wants to protect as proprietary, such items should be included in the definition of Proprietary Information to ensure such protection. Additional materials can be found at 48 CFR 927.400.

Parties may wish to return Proprietary Information before the conclusion of the CRADA, when such information is no longer needed for CRADA work.

## **ARTICLE VIII: OBLIGATIONS AS TO PROTECTED CRADA INFORMATION**

### **LANGUAGE:**

- A. *Each Party may designate as Protected CRADA Information any Generated Information produced by its employees which meets the definition of Article I.F and, with the agreement of the other Party, so designate any Generated Information produced by the other Party's employees which meets the definition of Article I.F. All such designated Protected CRADA Information shall be appropriately marked.*
- B. *For a period of \_\_\_\_\_ [not to exceed 5 years] from the date Protected CRADA Information is 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) as requested by the DOE Contracting Officer to be provided to other DOE facilities for use only at those 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 mutually agreed by the Parties in advance.*

**GUIDANCE:** Any delivery to DOE of Protected CRADA Information will be to implement the following policy:

- (1) Ensure that anticipated DOE mission benefit is received from CRADAs;
- (2) avoid duplication of expense and effort;
- (3) help to advance technology; and
- (4) enable DOE to meet statutory requirements to disseminate information after the expiration of the withholding period.

**OPTION 1:**

*B. For a period of \_\_\_\_\_ [not to exceed 5 years] from the date Protected CRADA Information is produced, pursuant to 15 U.S.C. 3710 a(c)(7)(B), the Parties agree not to further disclose such information and to use the same degree of care and discretion, but no less than reasonable care and discretion, to avoid disclosure, publication or dissemination of such information to a third party, as the Party employs for similar protection of its own information which it does not desire to disclose, publish, or disseminate except:*

- 1. as necessary to perform this CRADA;*
- 2. as provided in Article XI [REPORTS AND ABSTRACTS];*
- 3. as requested by the DOE Contracting Officer to be provided to other DOE facilities solely for Government use only at those 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 Participant's Protected CRADA Information under this subparagraph shall only be done with the Participant's consent; or*
- 5. as mutually agreed by the Parties in advance.*

**GUIDANCE:** Alternative language, which may be used if desired.

**OPTION 2:**

B. For a period of \_\_\_\_\_ [not to exceed 5 years] from the date Protected CRADA Information is produced, pursuant to 15 U.S.C. 3710 a(c)(7)(B), the Parties agree not to further disclose such information and to use the same degree of care and discretion, but no less than reasonable care and discretion, to avoid disclosure, publication, or dissemination of such information to a third party, as the Party employs for similar protection of its own information which it does not desire to disclose, publish, or disseminate except:

1. as necessary to perform this CRADA;
2. as provided in Article XI: [REPORTS AND ABSTRACTS];
3. other than as provided in Article XI, as requested by the DOE Contracting Officer to be provided to other DOE facilities for use only at those 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 Participant's Protected CRADA Information under this subparagraph shall only be done with Participant's consent; or
5. as mutually agreed by the Parties in advance.

**GUIDANCE:** Alternative language, which may be used if desired.

C. The obligations of paragraph B above shall end sooner for any Protected CRADA Information which shall become publicly known without fault of either Party, shall come into a Party's possession without breach by that Party of the obligations of paragraph B above, or shall be independently developed by a Party's employees who did not have access to the Protected CRADA Information.

**OPTION:**

- C. *The obligations of paragraph B, above, shall end sooner for any Protected CRADA Information which shall become publicly known without fault of either Party, shall be independently developed outside of the CRADA by a Party's employees who did not have access to the Protected CRADA Information, or is disclosed through a product released by the Participant. If recipient receives any information independently developed by a third party without any obligation of confidentiality which is similar to Protected CRADA Information, disclosure by recipient of such third party information shall not be a breach of this CRADA.*

**GUIDANCE:** Alternative language, which may be used if desired.

**GENERAL GUIDANCE:**

If the parties desire, provisions for Protected CRADA Information can also be included with the normal marking requirements and exceptions. The contractor cannot negotiate away DOE's right to share Protected CRADA Information with other DOE facilities having the same protection in place without the approval of the DOE operations or field office responsible for the CRADA. Article VIII.B of the DOE Modular CRADA or comparable language must be included in the CRADA.

The parties should negotiate the respective responsibilities for marking Generated Information that meets the definition of Protected CRADA Information and the obligations that will attach to such information. To avoid losing the ability to mark Generated Information as Protected CRADA Information, the determination as to which Generated Information is to be marked as Protected CRADA Information should be made when the Generated Information is produced, not at the end of the CRADA. The parties shall embody the rights and obligations in an appropriate legend. The DOE Modular CRADA language allows each party to mark its own Generated Information and Generated Information of the other party with its agreement. The parties should address the issue of further dissemination of Protected CRADA Information within the DOE community. The wording of the definition for Protected CRADA Information should be along the lines of the Stevenson-Wydler statute (15 U.S.C. 3710a(c)(7)(B)) and placed in the Definitions article to support the substantive clause on protecting this material. The CRADA must include a requirement that designated Protected CRADA Information be appropriately marked.

Generated Information that is marked Protected CRADA Information cannot be protected for more than 5 years from the date it is produced. The parties should negotiate the term for which it will be protected and the nature of the obligations of the parties with regard to such Protected CRADA Information. If no protection is needed or when protection is no longer permitted, the parties should resolve to quickly publish the Generated Information.

## ARTICLE IX: RIGHTS IN GENERATED INFORMATION

### LANGUAGE:

*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 (a) information which is marked as being Copyrighted (subject to Article XIII) or as Protected CRADA Information (subject to Article VIII B) or as Proprietary Information (subject to Article VII B), or (b) information that discloses an invention which may later be the subject of a U.S. or foreign Patent application.*

### OPTION:

*The Parties and the Government shall have unlimited rights in all Generated Information produced or provided by a Party under this CRADA, except for information which is: (a) disclosed in a Subject Invention disclosure being considered for Patent protection, (b) protected as a Mask Work, or (c) marked as being Copyrighted or as Protected CRADA Information or as Proprietary Information.*

**GUIDANCE:** Alternative language, which may be used if desired.

### GENERAL GUIDANCE:

There should be a provision recognizing the Government's unlimited rights in Generated Information, except as otherwise restricted.

## **ARTICLE X: EXPORT CONTROL**

### **LANGUAGE:**

- A. *THE PARTIES UNDERSTAND THAT MATERIALS AND 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.*

The following approved language was developed to address foreign ownership, control, or influence issues with respect to the Partner. It should only be used for those CRADAs involving access to classified information, access to special nuclear materials, or unescorted access to security areas of Departmental facilities. If it is not used, then there is only one paragraph, pertaining to export control, and the designator “A” may be deleted.

- B. *The Participant has a continuing obligation to provide the Contractor written notice of any changes in the nature and extent of foreign ownership, control, or influence over the Participant which would affect the Participant’s answers to the previously completed FOCI certification.*

### **GENERAL GUIDANCE:**

There must be an export control warning statement to warn the parties that material and information resulting from the CRADA may be export controlled. This statement should be conspicuous, like the UCC-like disclaimer.

If the CRADA involves access to classified information, access to special nuclear materials, or unescorted access to security areas of Departmental facilities, the requirements of the Atomic Energy Act of 1954, as amended, must be met, this article of the CRADA should be retitled “Export Control/Foreign Ownership and Control,” and language pertaining to FOCI should be added. The completed FOCI questionnaire attached hereto as Attachment 1 must be completed by the participant and included as an appendix to the CRADA.

## ARTICLE XI: REPORTS AND ABSTRACTS

### LANGUAGE:

- 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 (final when work is complete, and others as 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) *an annual signed financial report of the Participant's in-kind contributions to the project;*
  - (5) *other topical/periodic reports, when the nature of research and magnitude of dollars justify; and*
  - (6) computer software in source and executable object code format as defined within the Statement of Work or elsewhere within the CRADA documentation.

*Each of the above-identified deliverables shall include the project identification number as described in DOE's Research and Development (R&D) Tracking System Data and Process Guidance Document (<http://www.doe.gov/rd/>).*

- B. The Parties acknowledge that the Contractor has the responsibility to provide the above information at the time of its completion to the DOE Office of Scientific and Technical Information.
- C. *The Participant agrees to provide the above information to the Contractor to enable full compliance with paragraph B of this article.*

(DOE has a responsibility to disseminate scientific and technical information, by 42 U.S.C. 2051(d), 42 U.S.C. 2161(b), and 42 U.S.C. 2166(b).)

- D. *The Parties acknowledge that the Contractor and DOE have a need to document the long-term economic benefit of the cooperative research under this CRADA. Therefore, the Participant shall respond to the Contractor's reasonable requests, during the term of*

*this CRADA and for a period of \_\_\_\_\_ years [2 to 5 years would be reasonable] thereafter for pertinent information.*

**GUIDANCE:** There is currently no requirement that the participant must respond to information requests made by the Department through the contractor regarding long-term economic data (i.e., the results of commercializing products, processes, or services based on this CRADA), but the participant should recognize that the Department has a need to measure economic outcomes of CRADAs that it funds. Such follow-up surveys are already being done for R&D 100 award-winning technologies without intruding into sensitive market or financial information. Measurement of the outcomes of cooperative research, both for the Department and for the participant, is a very important aspect of the Department's Technology Partnerships activity. Examples of the types of long-term economic data that could be sought include jobs created/lost/retained, increases in market share, and sales increases. Surveys would be done in such a way that answers are provided in broad categories (i.e., 1-50 jobs created, etc.) in a "check-the-box" approach. Mechanisms used to gather the information could include customer surveys, third-party personal interviews, and third-party studies commissioned by the Department.

**GENERAL GUIDANCE:**

The CRADA must include a provision setting forth the required deliverables. The contractor should ensure that the CRADA specifies, at a minimum, abstracts, a final report, and other topic/periodic reports (where appropriate) to be furnished to DOE. The abstracts should not contain any Proprietary Information. An abstract suitable for public release, which is not protectable, must be furnished to DOE as part of DOE's annual R&D data call. Further, where the participant and/or the contractor identifies that such reports contain Protected CRADA Information, the reports will be properly marked with a restrictive legend identifying the agreed-to period of withholding from public disclosure. Such reports shall be furnished to the DOE Office of Scientific and Technical Information (OSTI) for Departmental use only and be withholdable for the stated withholding period as materials exempt from Subchapter II of Chapter 5 of Title 5, United States Code. The contractor must ensure that adequate deliverables are provided to OSTI to ensure that the results of DOE-approved CRADAs are made known to other DOE contractors for DOE program needs.

Alternative language may be developed in other instances, such as a CRADA involving technical assistance, where the type of work to be performed does not lead to the documentation required by the language of this article.

The Contracting Officer will direct the contractor as to which deliverables will be furnished to OSTI. This will include, as a minimum, (1) an initial abstract suitable for public release, (2) a final report, and (3) all generated software in source and object code format, as defined within the Statement of Work. All deliverables and/or accompanying transmittal documents shall reference the associated R&D Tracking System project identification number, which is more fully described at the following Web site:

<http://www.doe.gov/rd/>. The initial abstract should be provided with other required CRADA information as part of DOE's annual R&D data call.

The submission of an annual signed financial report of the participant's in-kind contributions to the project will both provide assurance that the participant is providing in-kind contributions in accordance with the CRADA and indicate the validity and reasonableness of the participant's valuation of its in-kind contributions.

The Scope of Work should be written so that the agreed-upon deliverables are included in it.

CRADA reports should fully cover and describe the research done under the CRADA, incorporating technical data as needed to support conclusions, and including Protected CRADA Information as appropriate. The format for CRADA reports will comply with OSTI's requirements.

Cooperative research performed in CRADAs involves industrial partners that have information which they consider to be of commercial value. Such commercially valuable information could possibly be divulged in the formal CRADA document, including the incorporated Statement of Work. Because taxpayer funds are used in the Government share of CRADAs, it is possible that there will be requests for public release of the formal CRADA document. Commercially valuable information that the partner considers sensitive should not routinely be included in the CRADA, including the accompanying Statement of Work, unless specifically needed. Should DOE receive a request for public release of the formal CRADA document, only business-sensitive or proprietary information that qualifies under 5 U.S.C. 552(b)(4) will be exempt from release after appropriate review.

If no computer software is to be developed under this CRADA, subparagraph A(6) may be deleted.

## ARTICLE XII: PRE-PUBLICATION REVIEW

### LANGUAGE:

- A. *The Parties agree to secure pre-publication approval from each other which shall not be unreasonably withheld or denied beyond \_\_\_ days.*

### OPTION:

- A. *The Parties anticipate that their employees may wish to publish technical developments and/or research findings generated in the course of this CRADA. On the other hand, the Parties recognize that an objective of this CRADA is to provide business advantages to the Participant. In order to reconcile publication and business concerns, the Parties agree to a review procedure as follows:*

1. *Each Party (“Submitter”) shall submit to the other Party (“Recipient”), in advance, proposed written and oral publications pertaining to work under the CRADA. Proposed oral publications shall be submitted to the Recipient in the form of a written presentation synopsis and a written abstract.*
2. *The Recipient shall provide a written response to the Submitter within 30 days, either objecting or not objecting to the proposed publication. The Submitter shall consider all objections of the Recipient and shall not unreasonably refuse to incorporate the suggestions and meet the objections of the Recipient. The proposed publication shall be deemed not objectionable, unless the proposed publication contains Proprietary Information, Protected CRADA Information, export controlled information or material that would create potential statutory bars to filing the United States or corresponding foreign Patent applications, in which case express written permission shall be required for publication. In the event an objection is raised because of a potential statutory bar, the Recipient shall file its Patent application within \_\_\_\_\_ days of making such objection, after which time the Submitter is free to publish.*

**GUIDANCE:** Alternative language intended only to provide greater detail on procedures to be followed, which may be used if desired.

- B. The Parties agree that neither will use the name of the other Party or its employees in any promotional activity, such as advertisements, with reference to any product or service resulting from this CRADA, without prior written approval of the other Party.*

**GENERAL GUIDANCE:**

A publication review provision must be included in the CRADA. The pre-publication review process must consider the protection of rights to filing U.S. and foreign patent applications, since any disclosure may be a bar to filing.

## ARTICLE XIII: COPYRIGHTS

### LANGUAGE:

- A. *The Parties may assert Copyright in any of their Generated Information. Assertion of Copyright generally means to enforce or give an indication of an intent or right to enforce such as by marking or securing Federal registration.*
- B. *[Allocation of rights to Copyrights in Generated Information will be negotiated by the Parties.]*

#### OPTION 1:

- B. *Each Party shall have the first option to assert Copyright in works authored by its employees. Copyrights in co-authored works by employees of the Parties shall be held jointly, and use by either Party shall be without accounting. A Party electing not to assert Copyright in a work authored by its employees agrees to assign such Copyright to the other Party upon the request of, and at the expense of, the other Party.*

**GUIDANCE:** Alternative language, which may be used if desired.

#### OPTION 2:

- B. *All Participant and Contractor Copyrights to original information for which authorship takes place during the performance of work under this CRADA shall be owned and licensed as set forth in Appendix \_\_\_\_ (if any) subject to any obligation of protection as required in Articles VII and VIII and other provisions of this article.*

**GUIDANCE:** Alternative language, which may be used if desired.

- C. *For Generated Information, the Parties acknowledge that the Government has for itself and others acting on its behalf, a royalty-free, nontransferable, nonexclusive, 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 Copyrightable works produced in the performance of this CRADA, subject to the restrictions this CRADA places on publication of Proprietary Information and Protected CRADA Information.*

(DOE has a responsibility to disseminate scientific and technical information, by 42 U.S.C. 2051(d), 42 U.S.C. 2161(b), and 42 U.S.C. 2166(b).)

D. *For all Copyrighted computer software produced in the performance of this CRADA, the Party owning the Copyright will provide the source code, an expanded abstract as described in Appendix \_\_, the executable object code and the minimum support documentation needed by a competent user to understand and use the software to DOE's Energy Science and Technology Software Center, P.O. Box 1020, Oak Ridge, TN 37831. The expanded abstract will be treated in the same manner as Generated Information in paragraph C of this article.*

E. *The Contractor and the Participant agree that, with respect to any Copyrighted computer software produced in the performance of this CRADA, DOE has the right, at the end of the period set forth in paragraph B of Article VIII hereof and at the end of each 2-year interval thereafter, to request the Contractor and the Participant and any assignee or exclusive licensee of the Copyrighted software to grant a nonexclusive, partially exclusive, or exclusive license to a responsible applicant upon terms that are reasonable under the circumstances, provided such grant does not cause a termination of any licensee's right to use the Copyrighted computer software. If the Contractor or the Participant or any assignee or exclusive licensee refuses such request, the Contractor and the Participant agree that DOE has the right to grant the license if DOE determines that the Contractor, the Participant, assignee, or licensee has not made a satisfactory demonstration that it is actively pursuing commercialization of the Copyrighted computer software.*

*Before requiring licensing under this paragraph E, DOE shall furnish the Contractor/Participant written notice of its intentions to require the Contractor/Participant to grant the stated license, and the Contractor/Participant shall be allowed 30 days (or such longer period as may be authorized by the cognizant DOE Contracting Officer for good cause shown in writing by the Contractor/Participant) after such notice to show cause why the license should not be required to be granted.*

*The Contractor/Participant shall have the right to appeal the decision by DOE to the grant of the stated license to the Invention Licensing Appeal Board as set forth in paragraphs (b)-(g) of 10 CFR 781.65, "Appeals."*

F. *The Parties agree to place Copyright and other notices, as appropriate for the protection of Copyright, in human-readable form onto all physical media, and in digitally encoded form in the header of machine-readable information recorded on such media such that the notice will appear in human-readable form when the digital data are off loaded or the data are accessed for display or printout.*

**GENERAL GUIDANCE:**

DOE, by approving a CRADA, authorizes the participant and the contractor to assert copyright in Generated Information. The parties must grant to the United States an irrevocable, paid-up copyright license to any and all works that come out of the project and may be copyrightable. The parties may also make this or any other negotiated license reciprocal among themselves. As an alternative, the parties can agree as part of the CRADA to negotiate the software license rights each party is to receive upon the production and copyright of software under the CRADA. The contractor must ensure that all copyrighted works are available to other DOE contractors for Governmental purposes. However, the Government-retained license may be limited with the approval of the field office. Any restriction on the Government and others acting by or on behalf of the Government of the right to prepare derivative works or the right to use any copyrighted Generated Information must also be approved by the Assistant General Counsel for Technology Transfer and Intellectual Property.

Copies of all generated computer software on which copyright protection will be asserted must be delivered to the Energy Science and Technology Software Center (ESTSC) by either (1) delivering same directly to ESTSC or (2) delivering same to the contractor, who will in turn deliver it to ESTSC. The delivery to the DOE ESTSC of materials with respect to copyrighted computer software may be done by having the participant deliver the materials to the contractor who will in turn deliver them to the ESTSC. The contractor may delay the applicability of the DOE march-in rights of paragraph E for up to 5 years from the date that the software is produced. The participant should be given a right of appeal to DOE's march-in right.

Co-authored copyrighted material should be addressed in the CRADA. One way is to specify that any copyrights in Generated Information jointly attributable to contractor and participant employees should be jointly owned by the contractor and the participant.

The parties should also be careful to appropriately mark as Protected CRADA Information in human-readable form onto all physical media and in digitally encoded form in all machine-readable information.

A suggested format for the expanded abstract called for in Article XIII is attached hereto as Attachment 3.

If no copyrights are contemplated to be created under a CRADA, this article may be [reserved].

## ARTICLE XIV: REPORTING SUBJECT INVENTIONS

### LANGUAGE:

- A. *The Parties agree to disclose to each other each Subject Invention which may be patentable or otherwise protectable under the Patent Act. The Parties agree that the Contractor and the Participant will disclose their respective Subject Inventions to DOE and each other within two (2) months after the inventor first discloses the Subject Invention in writing to the person(s) responsible for Patent matters of the disclosing Party.*

### OPTION:

- A. *The Parties agree to disclose to each other through the project managers each Subject Invention which may be patentable or otherwise protectable under the Patent Act within 2 months, or such longer period as is reasonably required, after the inventor first discloses the Subject Invention in writing to the person(s) responsible for Patent matters of the disclosing Party. The Contractor and the Participant will disclose such Subject Inventions to DOE, the Contractor doing so in accordance with its prime contract.*

**GUIDANCE:** Alternative language, which may be used if desired. If the alternative language is used, the alternate article on project management should be used, as well, in order to provide a definition and list of duties for project managers.

- B. *These disclosures should be in sufficiently complete technical detail to convey a clear understanding, to the extent known at the time of the disclosure, of the nature, purpose, and operation of the Subject Invention. The disclosure shall also identify any known actual or potential statutory bars; i.e., printed publications describing the Subject Invention or the public use or “on sale” of the Subject Invention in this country. The Parties further agree to disclose to each other any subsequently known actual or potential statutory bar that occurs for a Subject Invention disclosed but for which a Patent application has not been filed. All Subject Invention disclosures shall be marked as confidential under 35 U.S.C. 205.*

**OPTION 1:**

- B. These disclosures should be in sufficiently complete technical detail to convey a clear understanding to the extent known at the time of the disclosure of the nature, purpose, and operation of the Subject Invention and shall also identify any events that could give rise to a statutory bar (i.e., printed publications describing the Subject Invention or the public use or “on sale” of the Subject Invention in this country). The Parties further agree to disclose to each other any subsequently known statutory bar that occurs for a Subject Invention disclosed but for which a Patent application has not been filed. All Subject Invention disclosures shall be marked as confidential under 35 U.S.C. 205.*

**GUIDANCE:** Alternative language, which may be used if desired.

**OPTION 2:**

- B. These disclosures should be in sufficiently complete technical detail to convey a clear understanding to the extent known at the time of the disclosure of the nature, purpose, and operation of the Subject Invention. The disclosure shall also identify any statutory bars; i.e., printed publications describing the Subject Invention or the public use or “on sale” of the Subject Invention in this country. The Parties further agree to disclose to each other any subsequent statutory bar that occurs for a Subject Invention disclosed but for which a Patent application has not been filed. All Subject Invention disclosures shall be marked as confidential under 35 U.S.C. 205.*

**GUIDANCE:** Alternative language, which may be used if desired.

**GENERAL GUIDANCE:**

The CRADA must include an article which states that the parties agree to promptly disclose to each other and to DOE all Subject Inventions made under the CRADA. Disclosures should be written so as to serve as a basis for patent applications. Since any public disclosure can be a bar to U.S. and some foreign filings, the parties may wish to state that the disclosure should identify any publication describing the invention, public use, or sale of the invention.

## ARTICLE XV: TITLE TO SUBJECT INVENTIONS

### LANGUAGE:

*Wherein DOE has granted the Participant and the Contractor the right to elect to retain title to their respective Subject Inventions, and wherein the Participant has the option to choose an exclusive license, for reasonable compensation, for a pre-negotiated field of use to the Contractor's Subject Inventions,*

- A. *[Allocation of rights will be negotiated by the Parties.]*

Some alternative options that may be used for subparagraph XV.A are:

#### **OPTION 1:**

- A. *Each Party shall have the first option to elect to retain title to any Subject Invention made by its employees and that election shall be made: (1) for the Participant, within 12 months of disclosure of the Subject Invention to DOE or (2) for the Contractor, within [insert in this space the time period specified in its prime contract for electing to retain title to Subject Inventions] of disclosure of the Subject Invention to DOE. If a Party elects not to retain title to any Subject Invention of its employees, the other Party shall have the second option to elect to retain title to such Subject Invention in accordance with Appendix \_\_\_\_ [if used] of this CRADA. DOE shall retain title to any Subject Invention which is not retained by any Party.*

**GUIDANCE:** Extensions under this option may be granted for good and sufficient cause. Nonprofit contractors may change "shall retain" to "may obtain" in the last sentence.

#### **OPTION 2:**

- A. *The Parties intend that title to any Subject Inventions of either Party shall be owned by \_\_\_\_\_, and the Parties agree to make the necessary elections and assignments to effect this intent (subject to any DOE approvals, if necessary).*

**OPTION 3:**

- A. *For Subject Inventions conceived or first actually reduced to practice under this CRADA, which are joint Subject Inventions made by the Contractor and the Participant, title to such Subject Inventions shall be jointly owned by the Contractor and the Participant.*

**GUIDANCE:** This may be used in conjunction with a statement that each party has title to Subject Inventions produced exclusively by that party.

**OPTION 4:**

Where it is appropriate to have a cross-licensing provision, paragraph XV.A can be amended to include the following statement:

- A. *Each Party grants the other Party a nonexclusive, transferable, irrevocable, paid-up license to practice or to have practiced for or on behalf of that Party every invention arising out of this agreement throughout the world, with a right to grant sublicenses of no greater scope to others.*

**OPTION 5:**

- A. *The Participant acknowledges that the Contractor has offered to the Participant the option to choose an exclusive license for a pre-negotiated field of use for reasonable compensation for any Subject Invention made in whole or in part by a Contractor employee.*

**GUIDANCE:** This may be used in conjunction with other language allocating invention rights where the Contractor retains title to its inventions. In some cases a participant may not want the CRADA to include the option to choose the field of use license. To ensure that it is documented that the statutorily required option has been offered in those cases, it is suggested that a pre-agreement notice or other correspondence with a potential participant provide a notice to the participant about the option. In this situation, the Contractor should include an acknowledgment of the notice in the CRADA.

- B. *The Parties acknowledge that 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.

(Authority: 35 U.S.C. 202(c)(2) for DOE's nonprofit management and operating contractors entering into CRADAs and by DOE policy for other management and operating contractors and CRADA participants.)

- 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.

(Authority: 15 U.S.C. 3710a (b)(2)&(3), as well as 35 U.S.C. 202(c)(4))

The following additional paragraph, or one with similar language, placing a time limit for the participant's exercise of the field of use license in contractor inventions may be added if desired:

- D. *The Participant has the option for \_\_\_\_\_ (insert a time period) plus a period of not more than 6 months after completion or termination of this CRADA to choose an exclusive license in Contractor's Subject Inventions in the field of use of \_\_\_\_\_ (insert the field of use negotiated between the Parties).*

**OPTION:**

- D. *During the term of this CRADA and for a period of 6 months after the termination or completion of the CRADA, the Participant shall have the opportunity, pursuant to 15 U.S.C. 3710a, to obtain a license to [insert laboratory name] Subject Inventions. In particular, the Participant shall have the option to obtain, up to and including, an exclusive license to [insert laboratory name] Subject Inventions within a defined field of use on agreed-upon reasonable terms and conditions, including the payment of negotiated license fees and royalties.*

**GENERAL GUIDANCE:**

The CRADA must include an article which sets forth the allocation of rights to Subject Inventions between the parties. Through a class waiver at each laboratory, DOE has provided the participant with title to inventions made by employees of the participant. The terms and conditions of that waiver have been effectively changed by P.L. 104-113 (the National Technology Transfer Act of 1995, hereinafter in this guidance, the "Act") to include a field of use license granted to the participant in Subject

Inventions made in whole or in part by the contractor and the Government license and march-in rights contained in the Act. The article must indicate that DOE retains rights for Subject Inventions for which a party to the CRADA does not file patent applications or maintain patents. The article must also provide 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 the CRADA throughout the world.

The Act provides that the contractor must ensure through the CRADA that the participant has the option to choose an exclusive license for a pre-negotiated field of use to contractor Subject Inventions. This can be accomplished by providing the optional language in Article XV of the CRADA or in an appendix thereto.

The exclusive license itself, per the Act, may be only in exchange for reasonable compensation, when appropriate, and subject only to reasonable terms and conditions associated with obtaining reasonable compensation. Failure of the participant to fulfill its obligations under the CRADA, minimum annual royalty payments, objective performance obligations in the license agreement, contributions to the costs of prosecution and litigation to maintain a patent and other commercially reasonable terms are terms are considered to be associated with obtaining reasonable compensation, which will satisfy the statutory requirement of "for reasonable compensation." Although these are the types of terms that may be reasonable in appropriate circumstances, DOE does not require that any or all of these terms be a condition of the license in all circumstances. Additionally, the exclusive license may be limited to a negotiated field of use. In accordance with the Act, the license must provide the participant with the right of enforcement under Chapter 29 of Title 35 U.S.C.

The contractor should document the terms of the option and whether the option was exercised or not.

## ARTICLE XVI: FILING PATENT APPLICATIONS

### LANGUAGE:

- A. *The Parties agree that the Party initially indicated as having an ownership interest in any Subject Inventions (“Inventing Party”) shall have the first opportunity to file U.S. and foreign Patent applications. If the Participant does not file such applications within 1 year after election, or if the Contractor does not file such applications within the filing time specified in its prime contract, the other Party to this CRADA exercising an option pursuant to Article XV may file Patent applications on such Subject Inventions. If a Patent application is filed by the other Party (“Filing Party”), the Inventing Party shall reasonably cooperate and assist the Filing Party, at the Filing Party’s expense, in executing a written assignment of the Subject Invention to the Filing Party and in otherwise perfecting the Patent application, and the Filing Party shall have the right to control the prosecution of the Patent application. The Parties shall agree between themselves as to who will file Patent applications on any joint Subject Invention.*

**GUIDANCE:** The parties may also wish to set forth who files for patents on which inventions, including the treatment of joint inventions. If extensions of time are necessary, on a case-by-case basis, such extensions can be obtained consistent with Article XXIX. Other terms for filing foreign applications can be negotiated when appropriate.

### OPTION:

- A. *The Parties agree that the Party initially indicated as having an ownership interest in any Subject Inventions shall have the first opportunity to file U.S. and foreign Patent applications; but if such Party does not file such applications within 1 year after disclosure, the other Party to this CRADA may file Patent applications on such Subject Inventions. If a Patent application is filed by the other Party (“Filing Party”), the Inventing Party shall reasonably cooperate and assist the Filing Party, at the Filing Party’s expense, in executing a written assignment of the Subject Invention to the Filing Party and in otherwise perfecting the Patent application, and the Filing Party shall have the right to control the prosecution of the Patent application. The Parties shall agree among themselves as to who will file Patent applications on any joint Subject Invention.*

**GUIDANCE:** Alternative language, which may be used if desired.

- B. The Parties agree that DOE has the right to file Patent applications in any country if neither Party desires to file a Patent application for any Subject Invention. Notification of such negative intent shall be made in writing to the DOE Contracting Officer within 3 months of the decision of the non-Inventing Party to not file a Patent application for the Subject Invention pursuant to Article XV or not later than 60 days prior to the time when any statutory bar might foreclose filing of a U.S. Patent application.*
- C. The Parties agree to include within the beginning of the specification of any U.S. Patent applications and any Patent issuing thereon (including foreign Patents) covering a Subject Invention, the following statement: "This invention was made under a CRADA (identify CRADA number) between (name the Participant) and (name the laboratory) operated for the United States Department of Energy. The Government has certain rights in this invention."*

Three additional paragraphs have been approved for use in this article, if desired:

- D. A Party electing title or filing a Patent application in the United States or in any foreign country shall advise the other Party and DOE if it no longer desires to continue prosecution, pay maintenance fees, or retain title in the United States or any foreign country. The other Party and then DOE will be afforded the opportunity to take title and retain the Patent rights in the United States or in any such foreign country.*
- E. Each Party agrees to provide the project manager of the other Party with a copy of each Patent application it files on any Subject Invention.*

**GUIDANCE:** This paragraph F can be used in any event, but if it is used, it will be necessary to include the additional article providing a definition and list of duties of the project manager.

- F. Every \_\_\_\_\_ months from the date of the CRADA, each Party shall deliver to the other Party interim reports listing the Subject Inventions, if any, it has produced during the preceding \_\_\_\_\_ -month period. If a Party has produced no Subject Invention for any \_\_\_\_\_ -month period, the Party's interim report for that period will explicitly state so.*

**GENERAL GUIDANCE:**

The CRADA must include an article in which the parties agree that if neither party desires to file a patent application for any invention, notice of such negative intent shall be made to DOE not later than 60 days prior to the time when any statutory bar might foreclose filing of a U.S. patent application.

## ARTICLE XVII: TRADEMARKS

If no trademarks are contemplated to be created under the CRADA, this article may be [reserved]. If trademarks are contemplated to be created under the CRADA, the following language may be used for this article.

### LANGUAGE:

*The Parties may seek to obtain Trademark/Service Mark protection on products or services generated under this CRADA in the United States or foreign countries. [The ownership and other rights relating to this Trademark shall be as mutually agreed to in writing by the Parties.] The Parties hereby acknowledge that the Government shall have the right to indicate on any similar goods or services produced by or for the Government that such goods or services were derived from and are a DOE version of the goods or services protected by such Trademark/Service Mark, with the Trademark and the owner thereof being specifically identified. In addition, the Government shall have the right to use such Trademark/Service Mark in print or communications media.*

**OPTION:** The following language is an option for the bracketed language in the above paragraph:

*The Party originating the Trademark/Service Mark on products or services generated under this CRADA in the United States or foreign countries shall have the full right, title, and interest in such Trademark or Service Mark subject only to the Government's retained right to use the mark on any similar goods or services as set forth below.*

**OPTION:** The following sentence may be added to the end of the above standard language paragraph, if desired:

*Where the Government indicates on goods that such goods were derived from goods protected by a Trademark/Service Mark, the Government will also indicate that the Trademark owner has had no right to perform a quality review/inspection of the DOE version of the goods.*

**GUIDANCE:** One CRADA participant objected to the Government's retention of any right to use any trademark owned by the participant because the participant had no right to perform a quality review or inspection of the DOE version of the trademarked goods. The above addition to the language is offered as a possible response to such an objection.

**GENERAL GUIDANCE:**

By approving a CRADA, DOE authorizes the contractor and the participant to assert trademark protection for products or services arising out of the performance of that CRADA. The parties shall acknowledge the Government's right to indicate the relationship between the goods and services it produces and those protected by trademark/service mark in appropriate circumstances. The parties may negotiate between themselves any licensing rights they desire, consistent with the Government's license.

Trademarks for jointly developed products or services should be addressed in the CRADA. One way is to specify that any trademarks in generated products or services jointly attributable to contractor and participant employees shall be jointly owned by the contractor and the participant.

## ARTICLE XVIII: MASK WORKS

If no mask works are contemplated to be created under the CRADA, this article may be [reserved]. If mask works are contemplated to be created under the CRADA, the following language may be used for this article.

### LANGUAGE:

*The Parties may seek to obtain legal protection for Mask Works fixed in semiconductor products generated under this agreement as provided by Chapter 9 of Title 17 of the United States Code. [The rights to any Mask Work covered by this provision shall be as mutually agreed to in writing by the Parties.] The Parties hereby acknowledge that the Government or others acting on its behalf shall retain a nonexclusive, paid-up, worldwide, irrevocable, nontransferable license to reproduce, import, or distribute the covered semiconductor product by or on behalf of the Government, and to reproduce and use the Mask Work by or on behalf of the Government.*

**OPTION:** The following language is an option for the bracketed language in the above paragraph:

*The allocation of rights to Mask Works will be commensurate with the distribution of Copyrights under Article XIII, paragraph B of this CRADA.*

### GENERAL GUIDANCE:

By approving a CRADA, DOE authorizes the contractor and the participant to assert mask work protection for semiconductor chip products first produced during the performance of the CRADA. The parties shall grant to the Government and others acting on its behalf an irrevocable, paid-up license to use any of these covered products. The parties may negotiate between themselves any licensing rights they desire, consistent with the Government's license.

Jointly developed semiconductor chip materials may be registered for protection; this should be addressed in the CRADA. One way to address this is to specify that any mask works fixed in semiconductor chip products generated under the CRADA and jointly attributable to contractor and participant employees shall be jointly owned by the contractor and the participant.

## ARTICLE XIX: COST OF INTELLECTUAL PROPERTY PROTECTION

### LANGUAGE:

*Each Party shall be responsible for payment of all costs relating to Copyright, Trademark, and Mask Work 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 solely owned by that Party. Government/DOE laboratory funds contributed as DOE's cost share to a CRADA cannot be given to the Participant for payment of the Participant's costs of filing and maintaining Patents or filing for Copyrights, Trademarks, or Mask Works.*

### OPTION:

*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.*

**GUIDANCE:** For use when trademark and mask work articles are omitted.

### GENERAL GUIDANCE:

The CRADA must include an article which sets out the parties' agreement on the costs of filing for and maintaining patents as well as the costs of filing for copyrights, trademarks, and mask works, where applicable. This article should include consideration of any jointly owned intellectual property.

## **ARTICLE XX: REPORTS OF INTELLECTUAL PROPERTY USE**

### **LANGUAGE:**

*The Participant agrees to submit, for a period of \_\_\_\_\_ years from the date of termination or completion of this CRADA and upon request of DOE, a nonproprietary report no more frequently than annually on efforts to utilize any Intellectual Property arising under the CRADA.*

### **GENERAL GUIDANCE:**

The CRADA must include an article in which the parties set out their agreement with regard to reporting efforts to obtain utilization of Intellectual Property arising under the CRADA. This article allows DOE to document the linkage of the CRADA to DOE mission benefits as well as to customer satisfaction and other performance measurement aspects of the CRADA program. As is indicated by the term limit, it is clearly intended that this participant obligation will survive completion or termination of the CRADA.

## ARTICLE XXI: DOE MARCH-IN RIGHTS

### LANGUAGE:

*The Parties acknowledge that 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).*

(Authority: 35 U.S.C. 203; 15 U.S.C. 3710a(b)(1)(B) and (C); and DOE policy:

- (1) Provides for consistent treatment of CRADA participants;
- (2) Helps promote commercialization of technology from CRADAs; and
- (3) Protects the interest of taxpayers.)

### OPTION:

*For Subject Inventions made solely by the participant and for assignments and exclusive licenses by the Contractor to the Participant in Subject Inventions made in whole or in part by the Contractor, 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 a field of use of interest to the applicant, 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 the 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 regulations and such requirements are not reasonably satisfied by the Participant; or (3) the Participant has failed to comply with the provision of Article XXII U.S. Competitiveness of this agreement.*

*For all other retained or transferred by the Contractor to Subject Inventions of the Contractor, the Contractor acknowledges that the DOE has certain march-in-rights in accordance with 48 CFR 27.304-1(g).*

**GUIDANCE:** Alternative language which may be used if desired.

### GENERAL GUIDANCE:

The CRADA must include an article which says that the parties recognize that DOE has certain march-in rights to any inventions arising from the performance of this CRADA in accordance with 48 CFR 27.304-1(g) and 15 U.S.C. 3710a(b)(1)(B) and (C).

## ARTICLE XXII: U.S. COMPETITIVENESS

### LANGUAGE:

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

- A. *In exchange for the benefits received under this CRADA, the Participant therefore agrees to the following:*
1. *Products embodying Intellectual Property developed under this CRADA shall be substantially manufactured in the United States, and*
  2. *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 United States, shall not result in reduction of the use of the same processes, services, or improvements in the United States.*

### OPTION:

- A. *A plan for providing net benefit to the U.S. economy is attached in Appendix \_\_\_\_\_.*

**GUIDANCE:** If the participant is unable or unwilling, in advance, to meet the requirements of Article XXII.A.1 and XXII.A.2, above, this language will be substituted for paragraph A.

- B. *The Contractor agrees to a U.S. Industrial Competitiveness clause in accordance with its prime contract with respect to any licensing and assignments of its intellectual property arising from this CRADA, except that any licensing or assignment of its intellectual property rights to the Participant shall be in accordance with the terms of paragraph A of this article.*

### GENERAL GUIDANCE:

The CRADA must include an article which sets forth the parties' agreement with respect to benefits to accrue to the U.S. economy as a result of the CRADA. The preferred benefit is that any products embodying any Intellectual Property resulting from the performance of the CRADA shall be manufactured substantially in the United States. This must be the laboratories' opening negotiating position for all CRADAs. Thus, any specific laboratory "model" CRADAs must include a U.S.

manufacturing commitment for products embodying Intellectual Property, not just inventions. Contractors shall ensure that adequate benefits are being secured for the U.S. taxpayer for the commercialization worldwide of Intellectual Property arising under the CRADA. Commitment to alternative benefits as part of or in conjunction with this article or another article of the CRADA (i.e., Article II) are acceptable in certain situations and are provided for in this guidance.

The Government, in funding CRADAs, is seeking to transfer technology to companies with significant manufacturing and research facilities in the United States in a way which will provide short- and long-term benefits to the U.S. economy and the industrial competitiveness of such companies.

The Department's policy on U.S. competitiveness is based on the fact that billions of taxpayer dollars have paid for the research at DOE laboratories. Before technology is transferred from DOE laboratories, we as negotiator/agents are required to ensure that the taxpayers (who also pay our salaries) will receive some return on their investment. The preferred benefit to the U.S. economy is the creation and maintenance of manufacturing capabilities and jobs within the United States. However, if a potential partner cannot identify increased U.S. jobs as a result of the technology being transferred, some other substantial economic benefit to the U.S. economy must be identified. DOE policy on U.S. competitiveness is stated in the memorandum of February 10, 1993, issued by the Director of Technology Utilization. DOE policy is summarized in the following list.

- It is DOE policy for the laboratories, in their selection of CRADA partners, to give preference to business units located in the United States which agree to substantially manufacture resulting technology in the United States.
- DOE will approve, as exceptions, agreements with some partners on the basis of contractual commitments to appropriate alternative benefits to the U.S. economy. Exceptions must be based on specific information and not generic assertions.
- When there are multiple partnering opportunities in a common technical or technology area, and limitations on resources for partnering, preference should be given to partnerships that accept the requirement for substantial U.S. manufacturing.
- The U.S. competitiveness aspects of prospective CRADA partners and CRADAs will be resolved as up-front matters, before completion of any Joint Work Statements. Where Joint Work Statements are forwarded to program offices, they will be preceded by either written assurances that the participant intends to accept the preferred Modular CRADA U.S. competitiveness language *in toto* or else a signed agreement in which the participant agrees to provide specific economic benefit to the U.S. economy under one or more criteria of the U.S. competitiveness work sheet. This signed agreement must set forth specific detailed measures. Departure from U.S. competitiveness commitments made by CRADA partners can be a basis for stopping work under the CRADA and will be considered as background information in any future CRADA negotiation with the same CRADA partner. It should also be emphasized to prospective CRADA partners that, once they give these U.S. competitiveness related

assurances to DOE, their departure from them in subsequent stages of the CRADA negotiation will result in prolonged negotiations and could be taken as evidence of negotiating in bad faith.

- If the operations or field office is unable or unwilling to make a determination as to whether U.S. competitiveness requirements have been satisfied, they should refer the matter to the appropriate program office for a determination. The program office may then consult with the Office of Technology Utilization and may also choose to seek the advice of the Technology Transfer Committee.
- DOE, in its policy on U.S. competitiveness, distinguishes among products, which are manufactured, and processes and services, which are practiced or implemented. In the context of a multi-national firm, it may be advantageous to the U.S. economy and to the competitive position of the firm for a process or service to be implemented worldwide as quickly as possible.

Attachment 2, U.S. Competitiveness Work Sheet, contains criteria for operations or field office and program office use in deciding whether U.S. competitiveness requirements have been satisfied, should it be necessary to use the above option.

When CRADAs involve foreign entities, additional factors must be addressed. Under Executive Order 12591, when considering whether to enter into a CRADA with a foreign company, and after consultation with the U.S. Trade Representative (USTR), appropriate consideration must be given to (1) whether the foreign company and/or its government permit and encourage U.S. entities to enter into similar agreements on a comparable basis; (2) whether the foreign government has policies to protect Intellectual Property rights; and (3) when the research will involve or produce technologies subject to U.S. national security export controls, whether the foreign government has adequate measures to protect the transfer of the technology to prohibited locations. Consideration of the first factor is also required under 15 U.S.C. 3710a(c)(4)(B).

The USTR consultation is required and is to be conducted through the Office of the Assistant General Counsel for Intellectual Property and Technology Transfer (GC-62) at DOE Headquarters. The USTR consultation does not address export control issues. The USTR opinion on the CRADA is not controlling. It is only required that their findings be considered by the person designated by the laboratory director that decides whether to enter into the CRADA.

## ARTICLE XXIII: ASSIGNMENT OF PERSONNEL

### LANGUAGE:

- A. *Each Party may assign personnel to the other Party's facility as part of this CRADA to participate in or observe the research to be performed under this CRADA. Such personnel assigned by the assigning Party shall not during the period of such assignments be considered employees of the receiving Party for any purpose.*

### OPTION:

- A. *Each Party may assign personnel to the other Party's facility as part of this CRADA. Such personnel assigned by the assigning Party to participate in or observe the research to be performed under this CRADA shall not during the period of such assignments be considered employees of the receiving 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.*

**GUIDANCE:** Alternative language providing more complete recitation of exclusions, which may be used for paragraph A, if desired.

- B. *The receiving Party shall have the right to exercise routine administrative and technical supervisory control of the occupational activities of such personnel during the assignment period and shall have the right to approve the assignment of such personnel and/or to later request their removal by the assigning Party.*

### OPTION:

- B. *The assigning Party's employees and agents shall observe the working hours, security and safety rules, and holiday schedule of the receiving Party while working on the receiving Party's premises. The receiving Party shall have the reasonable right to approve the assignment of personnel or request their removal by the assigning Party.*

**GUIDANCE:** Alternative language, which may be used if desired.

- C. *The assigning Party shall bear any and all costs and expenses with regard to its personnel assigned to the receiving Party's facilities under this CRADA. The receiving Party shall bear facility costs of such assignments.*

**OPTION:**

- C. *The assigning Party shall bear any and all costs and expenses with regard to its personnel assigned to the receiving Party's facilities under this CRADA. The receiving Party shall bear the costs of providing an appropriate work space, access to a telephone, use of laboratory, manufacturing or other work areas as appropriate, and any other utilities and facilities related to such assignments.*

**GUIDANCE:** Alternative language providing more complete and explicit recitation of facilities, etc., to be provided by the receiving party to assigned personnel, which may be used for paragraph C, if desired.

**GENERAL GUIDANCE:**

If it is anticipated that personnel may be assigned back and forth between the facilities, a provision for such assignments must be included in the CRADA so that such assignments of personnel can be easily facilitated during the course of the CRADA. The contractors should ensure that, when this article is being discussed, the participants are given copies of contractor regulations, procedures, policies, and practices for entrance of outside personnel to work in the laboratories and/or facilities, especially where foreign participants are involved. DOE facilities must comply with U.S. export and security laws when receiving assigned foreign national partner personnel.

## **ARTICLE XXIV: FORCE MAJEURE**

### **LANGUAGE:**

*No failure or omission by the Contractor or the Participant 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 Contractor or the Participant, including but not limited to the following, which, for the purpose of this CRADA, shall be regarded as beyond the control of the Party in question: Acts of God, acts or omissions of any government or agency thereof, compliance with requirements, 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.*

### **GENERAL GUIDANCE:**

A force majeure clause stating that neither party will be liable for unforeseeable events beyond its reasonable control must be included in the CRADA. The above language may be expanded.

## ARTICLE XXV: ADMINISTRATION OF THE CRADA

### LANGUAGE:

*The Contractor enters into this CRADA under the authority of its prime contract with DOE. The Contractor is authorized to and will administer this CRADA in all respects unless otherwise specifically provided for herein. Administration of this CRADA may be transferred from the Contractor to DOE or its designee with notice of such transfer to the Participant, and the Contractor shall have no further responsibilities except for the confidentiality, use and/or nondisclosure obligations of this CRADA.*

### OPTION:

*The Contractor enters into this CRADA under the authority of its prime contract with DOE. The Contractor is authorized to and will administer this CRADA in all respects unless otherwise specifically provided for herein. Administration of this CRADA may be transferred from the Contractor to DOE or its designee as a successor to Contractor who is assuming responsibilities for the facilities managed by Contractor with notice of such transfer to the Participant, and the Contractor shall have no further responsibilities except for the confidentiality, use and/or nondisclosure obligations of this CRADA. This CRADA shall be binding upon and inure to the benefit of the Parties, and their respective successors and assigns.*

**GUIDANCE:** Alternative language, which may be used if desired.

### GENERAL GUIDANCE:

The CRADA must include an administration of CRADA article which says that the CRADA is entered into by the contractor under the authority of its prime contract with DOE. The article must also allow DOE to substitute another contractor (with notice to the participant) in the event that there is a change of contractors at the facility.

## ARTICLE XXVI: RECORDS AND ACCOUNTING FOR GOVERNMENT PROPERTY

### LANGUAGE:

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

### OPTION:

*The Participant shall maintain records of the following with respect to all Government property in its custody, related to the CRADA: receipts, expenditures, and dispositions. Participant represents that its accounting system is in accordance with generally accepted accounting principles.*

**GUIDANCE:** Alternative language, which may be used if desired.

### GENERAL GUIDANCE:

The CRADA must include a records and accounting system provision, requiring the participant to maintain records of receipts, expenditures, and the disposition of all Government property in its custody.

Where Government property will be under the participant's control, contractors should include language regarding periodic access, inspection, inventory, and records of the property. In such a case, the contractor may choose to add the following language:

*The Participant shall, with reasonable notice, grant to the Government and to the Contractor periodic access to Participant's premises during regular business hours for the purposes of inspection of CRADA-related Government property in its custody.*

## ARTICLE XXVII: NOTICES

### LANGUAGE:

- A. Any communications required by this CRADA, if given by postage prepaid first class U.S. Mail or other verifiable means addressed to the Party to receive the communication, shall be deemed made 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 the number of this CRADA.
- B. The addresses, telephone numbers, and facsimile numbers for the Parties are as follows:

### OPTION:

- B. The addresses, telephone numbers, and facsimile numbers for the Parties are as follows:

1. For CONTRACTOR:

U.S. Mail Only:	FedEx, UPS, Freight
_____	_____
_____	_____
_____	_____

a. FORMAL NOTICES AND COMMUNICATIONS, COPIES OF REPORTS

Attn: \_\_\_\_\_  
Tel: \_\_\_\_\_  
Fax: \_\_\_\_\_

b. PROJECT MANAGER, REPORTS, COPIES OF FORMAL NOTICES AND COMMUNICATIONS

Attn: \_\_\_\_\_  
Tel: \_\_\_\_\_  
Fax: \_\_\_\_\_

2. For PARTICIPANT:

U.S. Mail Only:	FedEx, UPS, Freight
_____	_____
_____	_____
_____	_____

a. FORMAL NOTICES AND COMMUNICATIONS, COPIES OF REPORTS

Attn: \_\_\_\_\_  
Tel: \_\_\_\_\_  
Fax: \_\_\_\_\_

b. PROJECT MANAGER, REPORTS, COPIES OF FORMAL NOTICES AND COMMUNICATIONS

Attn: \_\_\_\_\_  
Tel: \_\_\_\_\_  
Fax: \_\_\_\_\_

**GUIDANCE:** Alternative language, which may be used if desired.

**GENERAL GUIDANCE:**

There should be a provision for communications among the parties to the CRADA for invoicing and receipt of funds, as well as other notices under the CRADA. For funds-in CRADAs a billing and/or an invoice address for the participant can be added, if needed.

## ARTICLE XXVIII: DISPUTES

### LANGUAGE:

*The Parties shall attempt to jointly resolve all disputes arising from this CRADA. If the Parties are unable to jointly resolve a dispute within a reasonable period of time, they agree to follow the dispute resolution process set forth in Appendix \_\_\_\_\_. To the extent that there is no applicable U.S. Federal law, this CRADA and performance thereunder shall be governed by the law of the State of \_\_\_\_\_, without reference to that state's conflict of laws provisions.*

### OPTION 1:

*In the event of any controversy or claim arising under this CRADA, the Parties shall attempt to resolve the dispute through good faith negotiations. If the dispute cannot be resolved within 15 days, the Parties agree to submit the dispute to mediation by a trained, experienced mediator mutually selected by the Parties. The Parties agree to attempt to make such selection within 30 days after the dispute arises (the DOE Office of Disputes Resolution (GC-12) is available to assist with such selection).*

*The mediation shall commence within 30 days of selection of the mediator and shall be held in a mutually convenient location. The mediator's role shall be to facilitate an agreement between the Parties, based on their mutual interests. In the event that the Parties are unable to reach a resolution in mediation and they wish the mediator to proffer a nonbinding evaluation or a binding resolution, they must jointly request it in writing. Should the Parties select a binding resolution by the mediator, the maximum dollar value of the award, whether in money, property, or services, must be agreed to by the Parties and approved by the cognizant DOE Contracting Officer. The Parties agree to share the costs of mediation equally.*

*Neither Party will be prevented from resorting to a judicial proceeding if (1) good faith efforts to resolve the dispute have been unsuccessful or (2) interim relief from a court is necessary to prevent serious injury. To the extent that there is no applicable U.S. Federal law, this CRADA and performance thereunder shall be governed by the law of the State of \_\_\_\_\_.*

**GUIDANCE:** Alternative language, which may be used if desired.

**OPTION 2:**

*The Parties shall attempt to jointly resolve all disputes arising from this CRADA. If the Parties are unable to jointly resolve a dispute within a reasonable period of time, the dispute shall be decided by the DOE Contracting Officer, who shall reduce his/her decision to writing within 60 days of receiving in writing the request for a decision by either Party to this CRADA. The DOE Contracting Officer shall mail or otherwise furnish a copy of the decision to the Parties. The decision of the DOE Contracting Officer is final unless, within 120 days, the Participant brings an action for adjudication in a court of competent jurisdiction in the State of \_\_\_\_\_. To the extent that there is no applicable U.S. Federal law, this CRADA and performance thereunder shall be governed by the law of the State of \_\_\_\_\_.*

**GUIDANCE:** Alternative language, which may be used if desired.

**OPTION 3:**

*At the request of either Party, after reasonable attempt to settle without arbitration, any controversy or claim arising out of or relating to the CRADA shall be settled by arbitration conducted in the State of \_\_\_\_\_ in accordance with the then current and applicable rules of the American Arbitration Association. Judgment upon the award rendered by the Arbitrator(s) shall be nonbinding on the Parties.*

**GUIDANCE:** Alternative language, which may be used if desired.

**GENERAL GUIDANCE:**

The CRADA must include a dispute resolution article which requires the parties to attempt to settle disputes themselves (with or without the assistance of third parties, such as mediators) before taking them to court. If the parties are unable to jointly resolve a dispute within a reasonable period of time, they may agree to seek mediation, binding or nonbinding arbitration, use the good offices of the DOE Contracting Officer, and/or seek adjudication in a court of competent jurisdiction. It is strongly recommended that the contractor seek to include an intermediate step after it attempts to directly resolve the dispute with the participant before going to court.

If mediation is undertaken, it is recommended that the confidentiality provisions of the Alternative Dispute Resolution Act be incorporated into the agreement to mediate. Sample agreements are available from the DOE Office of Dispute Resolution. If the parties decide to replace mediation with another form of Alternative Dispute Resolution, such as a neutral evaluation or mini-trial, the DOE Office of Dispute Resolution (GC-12) can provide information and guidance on these processes.

## ARTICLE XXIX: ENTIRE CRADA AND MODIFICATIONS

### LANGUAGE:

- A. *This CRADA with its appendixes contains the entire agreement between the Parties with respect to the subject matter hereof, and all prior representations or agreements relating hereto have been merged into this document and are thus superseded in totality by this CRADA. This CRADA shall not be effective until approved by DOE.*
- B. *Any agreement to materially change any terms or conditions of this CRADA or the appendixes shall be valid only if the change is made in writing, executed by the Parties hereto, and approved by DOE.*

(based on: 15 U.S.C. 3710a(c)(5)(C)(iv))

#### OPTION 1:

The last sentence of paragraph A may be modified to read:

*This CRADA shall not be effective until approved by DOE and the effective date shall be the date when signed by the last of the Parties.*

**GUIDANCE:** Alternative language, which may be used if desired.

#### OPTION 2:

- A. *It is expressly understood and agreed that this CRADA with its appendixes, which are attached hereto and incorporated herein by reference, contains the entire agreement between the Parties with respect to the subject matter hereof and that all prior representations or agreements relating hereto have been merged into this document and are thus superseded in totality by this CRADA. This CRADA shall not be effective until approved by DOE.*

**GUIDANCE:** Alternative language, which may be used if desired.

### GENERAL GUIDANCE:

The CRADA must include an article stating that all the terms and conditions of the CRADA are entirely contained within the CRADA agreement and its appendixes (for example, Statement of Work). Subsequent modifications to the CRADA must acknowledge or supersede this statement.

## ARTICLE XXX: TERMINATION

### LANGUAGE:

*This CRADA may be terminated by either Party upon \_\_\_\_ days written notice to the other Party. This CRADA may also be terminated by the Contractor in the event of failure by the Participant to provide the necessary advance funding, as agreed in Article III.*

*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.*

### OPTION:

*The confidentiality, use, and/or non-disclosure obligations of this CRADA shall survive any termination of this CRADA.*

**GUIDANCE:** Additional language which may, if desired, be added to the end of the second paragraph above.

*FOR CONTRACTOR:*

*BY* \_\_\_\_\_

*TITLE* \_\_\_\_\_

*DATE* \_\_\_\_\_

*FOR PARTICIPANT:*

*BY* \_\_\_\_\_

*TITLE* \_\_\_\_\_

*DATE* \_\_\_\_\_

**OPTION 1:**

*This CRADA may be terminated by either Party upon 30 days written notice to the other Party. 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.*

**GUIDANCE:** Alternative language, which may be used if desired.

**GENERAL GUIDANCE:**

The CRADA should include a termination clause. The termination clause may also reference Article III, Funding and Costs, in so far as to clearly state that “failure of the participant to provide the necessary advance funding, or to promptly pay the invoices rendered by the contractor is cause for termination of the CRADA.”

When the contractor is entering into a CRADA with a division or subsidiary of another corporation, it may be desirable to add a statement to the signatory line of the participant stating that the person attests that he/she has the legal authority to bind the company to all the terms and conditions of the CRADA.

**ARTICLE \_\_\_\_: PROJECT MANAGEMENT**

A. *Each Party shall assign and identify in writing a project manager prior to the start of the CRADA. Either Party may change its project manager by providing written notification to the other Party. Each project manager shall be responsible for coordinating all matters relating to this CRADA, any Statement of Work hereunder, and all other related matters between the Parties. All communications between the Parties relating to this CRADA shall take place between the project managers.*

B. *Project managers for this CRADA are as follows:*

*for CONTRACTOR*

*for PARTICIPANT*

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

C. *The Parties will use reasonable efforts to manage the disclosure of Proprietary Information or Protected CRADA Information through the project managers or their designees; however, failure to do so will not cause any marked Proprietary Information or any marked Protected CRADA Information to lose the protection afforded by Articles VII and VIII.*

**GENERAL GUIDANCE:**

This additional article has been approved for use if desired. The same or similar information may also be provided under Article XXVII.B, in which case the title of that article should be “Notices and Project Management.”

These additional articles have been approved for use if desired:

**Article \_\_\_\_: Order of Precedence**

*In the event of a conflict between the provisions of the appendixes and those of this agreement, this agreement shall prevail.*

**Article \_\_\_\_: Waiver**

*The failure of the Contractor or the Participant at any time to enforce any provisions of this agreement or to exercise any right or remedy shall not be construed to be a waiver of such provisions or of such right or remedy or of the right of the Contractor or the Participant thereafter to enforce each and every provision, right, or remedy.*

**Article \_\_\_\_: Background Intellectual Property**

*The Contractor and the Participant have identified and agreed that the following Background Intellectual Property may be used in the performance of work under this CRADA and may be needed to practice the results of this CRADA:*

*Contractor's Background Intellectual Property:* \_\_\_\_\_  
\_\_\_\_\_

*Participant's Background Intellectual Property:* \_\_\_\_\_  
\_\_\_\_\_

*The Contractor and the Participant represent that the above-identified Background Intellectual Property is available for licensing as of the effective date of this CRADA.*

*Each Party has used reasonable efforts to list all relevant Background Intellectual Property, but Intellectual Property may exist that is not identified. Neither Party shall be liable to the other Party because of failure to list Background Intellectual Property.*

**Article \_\_\_\_: Background Intellectual Property**

*Each Party may use the other Party's Background Intellectual Property identified in Appendix D of this CRADA solely in performance of research under the Statement of Work. This CRADA does not grant to either Party any option, grant, or license to commercialize, or otherwise use the other Party's Background Intellectual Property. Licensing of Background Intellectual Property, if agreed to by the Parties, shall be the subject of separate licensing agreements between the Parties.*

*Each Party has used reasonable efforts to list all relevant Background Intellectual Property, but Intellectual Property may exist that is not identified. Neither Party shall be liable to the other Party because of failure to list Background Intellectual Property.*

## Attachment 1

### **FOCI QUESTIONNAIRE FOR APPLICABLE COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS**

(To be used by proposed participants in technology transfer agreements involving participant access to classified information or special nuclear materials or unescorted access to security areas of Departmental facilities. This information is requested in accordance with provisions of the Atomic Energy Act of 1954, as amended)

#### **Instructions:**

- I. For the purposes of this questionnaire, a foreign interest is defined as any of the following:
  - A. A foreign government or foreign government agency;
  - B. Any form of business enterprise organized under the laws of any country other than the United States or its possessions;
  - C. Any form of business enterprise organized or incorporated under the laws of the U.S., or a State or other jurisdiction within the U.S., which is owned, controlled, or influenced by a foreign government, agency, firm, corporation or person; or
  - D. Any person who is not a U.S. citizen.
  
- II. If your organization has not previously submitted responses to the following questions, then provide the information requested herein. Answer each question in either the yes or no space. If the answer to any of the questions is yes, provide the detailed information requested in the attached *Guidelines for Completing the FOCI Certification* for that specific question. Information which responds to these questions and which has been previously submitted to a Government agency may be resubmitted for this questionnaire if the information is accurate, complete, and current.
  
- III. If you own other entities, you must provide consolidated information for all your wholly- and majority-owned subsidiaries (foreign and domestic). If you are owned by a parent organization, it must also complete a FOCI certification which should be submitted along with your certification.

- IV. Each FOCI representation must also include the following supporting information:
- A. Identification of all your organization's owners, officers, directors and executive personnel, including their names; social security numbers; citizenship; titles of all positions they hold within your organization; and clearances they possess, if any, and the name of the agency(ies) which granted the clearances.
  - B. Your organization's latest annual report and the Securities and Exchange Commission Form 10-K. If you are a privately held company or a subsidiary of another corporation and cannot provide these documents, the appropriate official within your organization (e.g., chief financial officer, treasurer, or secretary) must provide the following consolidated financial information for all wholly and majority-owned subsidiaries and affiliates: assets, current and total; liabilities, current and total; stockholder's equity; revenue and net income; and the amount of revenue derived from foreign interests.
- V. The certification of the FOCI questionnaire must be signed by an individual who can legally do so for the participant and may include an owner, officer, or director.

**QUESTIONS:**

1. Does a foreign interest own or have beneficial ownership in 5% or more of your organization's voting securities?  
 Yes                       No
  
2. Does your organization own 10% or more of any foreign interest?  
 Yes                       No
  
3. Do any foreign interests have management positions such as directors, officers, or executive personnel in your organization?  
 Yes                       No
  
4. Does any foreign interest control or influence, or is any foreign interest in a position to control or influence the election, appointment, or tenure of any of your directors, officers, or executive personnel?  
 Yes                       No

5. Does your organization have any contracts, binding agreements, understandings, or arrangements with a foreign interest(s) that cumulatively represent 10% or more of your organization's gross income?

Yes                       No

6. Is your organization indebted to foreign interests?

Yes                       No

7. Does your organization derive any income from sensitive countries included on the attached list?

Yes                       No

8. Is 5% or more of any class of your organization's securities held in "Nominee shares," in "street names," or in some other method which does not disclose beneficial ownership of equitable title?

Yes                       No

9. Does your organization have interlocking directors with foreign interests?

Yes                       No

10. Are there any citizens of foreign countries employed by, or who may visit, your offices or facilities in a capacity which may permit them to have access to classified information or a significant quantity of special nuclear material?

Yes                       No

11. Does your organization have foreign involvement not otherwise covered in your answers to the above questions?

Yes                       No

**CERTIFICATION:**

Check one:

- ( ) I certify that the entries made herein are accurate, complete, and current to the best of my knowledge and belief and are made in good faith.
  
- ( ) I certify that the information requested herein has been previously submitted to the Department of Energy as required for a facility clearance and that the information in the previous submission is accurate, complete, and current for the purposes of this Cooperative Research and Development Agreement.

**CERTIFIED BY:**

\_\_\_\_\_: NAME OF PARTNER REPRESENTATIVE

\_\_\_\_\_: TITLE

\_\_\_\_\_: STREET ADDRESS

\_\_\_\_\_: CITY, STATE, ZIP CODE

\_\_\_\_\_: SIGNATURE AND DATE

**Attachment 1 (continued)**

**GUIDELINES FOR COMPLETING FOREIGN  
OWNERSHIP, CONTROL, OR INFLUENCE CERTIFICATION**

*Question Number 1. Does a foreign interest own or have beneficial ownership in 5% of more of your organization's voting securities?*

Identify the percentage of any class of shares or other securities issued which are owned by foreign interests, listed by country. If you answered "Yes" and have received from an investor a copy of Schedule 13D or Schedule 13G filed by the investor with the Securities and Exchange Commission, you are to attach a copy of Schedule 13D or Schedule 13G.

*Question Number 2. Does your organization own 10% or more of any foreign interest?*

If your answer is "Yes", furnish the name of the foreign interest, address by country, and the percentage owned. For each employee occupying a position with the foreign firm, provide the following information:

1. Complete name.
2. Citizenship.
3. Titles of positions within the foreign entity.
4. Clearances, if any, they possess, and by whom those clearances were granted.
5. To what extent the employees are involved in the operations of the foreign facilities.
6. Whether or not any of these individuals will, by virtue of their position, knowledge, or expertise, require access to Department of Energy classified information.

If the employees possess DOE clearances, or are in the process of being cleared, and hold positions with foreign interests, they need to complete the attached "Representative of Foreign Interest Statement" for each such firm.

Does your organization have branch or sales offices or other facilities, or are you qualified to do business as a foreign corporation in any other countries? If the answer is "Yes" list all.

What percentage of your organization's gross income is derived from your foreign subsidiaries or affiliates?

*Question Number 3. Do any foreign interests have management positions such as directors, officers, or executive personnel in your organization?*

Furnish details concerning the identity of the foreign interest and the position(s) held in your organization, to include the amount of time the individual spends at your facility. If the individual spends less than full time at your facility, provide information on how and where the rest of his/her time is spent.

*Question Number 4. Does any foreign interest control or influence, or is any foreign interest in a position to control or influence the election, appointment, or tenure of any of your directors, officers, or executive personnel?*

Identify the foreign interest(s) and furnish details concerning the control or influence. If the individuals have been excluded from access to Department of Energy classified information by Board resolution or corporate exclusion, an official (signed and dated) copy of such exclusion must be submitted with this package.

*Question Number 5. Does your organization have any contracts, binding agreements, understandings, or arrangements with a foreign interest(s) that cumulatively represent 10% or more of your organization's gross income?*

Furnish the name of the foreign interest, country, and nature of agreement or involvement. If there is no ownership involved in these arrangements, provide details along the same lines of information required for Question Number 2. Certification should be made as to whether or not the agreements are:

1. Purely commercial in nature.
2. Involve defense procurement.
3. Involve classified information.
4. Involve sensitive countries.

Provide the amount of revenue derived from foreign sources. This should be provided by country. Also, state the time frame, e.g., fiscal year ending December 31, 1992, during which the revenue was derived. This should include revenue from all foreign sources, e.g., subsidiaries, equity income derived from your interest in less than wholly owned subsidiaries, export sales, divestitures to foreign interests, royalties from licensing and patent agreements, dividends from foreign stock holdings, and investment or real estate. Compliance with export license requirements and international traffic in arms regulations (ITAR) requirements must be acknowledged, if applicable.

In addition, due to the political sensitivity of some countries, the Department of Energy requires that you provide the following information if you derive revenue and have other understandings or arrangements with sensitive countries:

1. The amount of international and export revenue.
2. The type of service or product provided (be specific—show whether they are commercial in nature or involve defense procurement).

3. Compliance with export license and ITAR requirements, if applicable.
4. Any other involvement not covered by the prior two elements of this question.

***NOTE: Information provided must be audited information, and NOT MORE THAN ONE YEAR OLD.***

*Question Number 6. Is your organization indebted to foreign interests?*

Report all lines of credit your organization has with foreign interests even if there is no current indebtedness. Provide the following information:

1. The amount and type of indebtedness.
2. If any debentures are convertible, explain under what circumstances.
3. The name(s) of the lending institution(s) and the country(ies) in which they are located.
4. What collateral, if any, has been furnished or pledged.
5. The total line of credit available from these lending institutions.
6. What percentage of your current assets does this indebtedness represent?
7. If you have a worldwide line of credit available, what is the total line of credit available from foreign sources?

***NOTE: If you own other entities, you must provide consolidated information for all of your wholly and majority-owned subsidiaries (foreign and domestic).***

#### **GENERAL GUIDANCE:**

DOE operations or field offices are required to include a foreign ownership, control, or influence (FOCI) review as part of their security review of Cooperative Research and Development Agreements (CRADAs) involving Participant access to classified information, access to special nuclear materials,<sup>1</sup> or unescorted access to security areas within Departmental facilities. If a CRADA does not involve access to classified information, special nuclear materials, or secure facilities, a FOCI review is not required to meet the Department's national security obligations as mandated by the Atomic Energy Act of 1954, as amended.<sup>2</sup>

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<sup>1</sup> For the purposes of these guidelines, special nuclear materials shall mean quantities as defined in 10 CFR Part 710.

<sup>2</sup> If an individual has the ability and/or opportunity to obtain access to classified information or matter by being in a place where such information or matter is accessible, and, if the security measures which are in force do not *prevent* the gaining of access to the classified information or matter, the FOCI review must be completed

In those cases requiring a FOCI review, DOE must receive the prospective partner's response to the eleven FOCI questions, including required additional information and the certification, prior to approval of the associated Joint Work Statement. These materials should be submitted as early as possible to the normal Joint Work Statement/CRADA contact at DOE, for referral to the Safeguards and Security point of contact so that the FOCI review process may be initiated expeditiously. If the operations office receives a proposed Joint Work Statement prior to submission of the needed responses to the FOCI questions, or a proposed CRADA prior to completion of the FOCI review and resolution of outstanding issues, the operations office must decide whether to return the Joint Work Statement or CRADA for further information or to disapprove it.<sup>3</sup>

In general, no CRADA involving access to classified information, access to special nuclear materials, or unescorted access to security areas of Departmental facilities will be approved until the FOCI review is complete and all FOCI issues are resolved. One option, available at operations office discretion, is to phase the work in such a way that unclassified activities are initiated in an earlier phase than those requiring access to classified information, special nuclear materials, or security areas of Departmental facilities. Approval of unclassified phases of the work could precede the completion of the FOCI determination. Approval of phases of the work involving classified information, special nuclear materials, or unescorted access to security areas of Departmental facilities must await the FOCI determination and resolution of any FOCI issues. The operations office may require additional justification from management and operating contractors to address the risk associated with terminating a CRADA between phases.

Implementation of the FOCI review should be done in a manner which ensures that DOE meets the statutory deadlines for processing Joint Work Statements and CRADAs. Information submitted by the partner as required pursuant to the FOCI review shall be treated by the management and operating contractor and by DOE, to the extent permitted by law, as business or financial information submitted in confidence to be used solely for purposes of evaluating FOCI<sup>4</sup>.

For CRADAs involving access to classified information or special nuclear materials or unescorted access to security areas of Departmental facilities, the CRADA must contain provisions which ensure that changes in the partner's FOCI status are promptly reported over the term of the agreement. If a partner reports such changes or if more than 5 years have passed since any previous FOCI determination, the management and operating contractor shall forward that information to DOE according to its established procedures for FOCI review. Certain changes in the FOCI status of the partner in an approved CRADA could result in direction from security organizations that access of the partner to classified information, special nuclear materials, or security areas of Departmental facilities be

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regardless of whether the CRADA involves classified matter or information.

<sup>3</sup> The option to return for additional information should not be used instead of a disapproval but only when the operations office does not have sufficient information to make an approval/disapproval decision.

<sup>4</sup> Nothing in this guidance relieves the obligation to address other considerations such as export control or U.S. competitiveness issues. Broad concerns about existing U.S. competitiveness policies and procedures should be referred to the chairperson of the DOE Technology Transfer Committee for discussion.

limited. The authority to limit access is inherent in operative DOE Orders. If the partner becomes subject to FOCI and cannot, or chooses not to, avoid or mitigate the FOCI problem, and the partner's access to classified information is essential to continuation of the collaborative work, the management and operating contractor shall provide notice of termination according to Article XXX of the CRADA and expedite the orderly shutdown of collaborative work.

## Attachment 2

### **U.S. COMPETITIVENESS WORK SHEET**

(For Use in Resolving Issues of U.S. Competitiveness Regarding  
Prospective Technology Transfer Agreements and Partners at DOE Laboratories)

The Government, authorizing CRADAs, is seeking to transfer technology to companies with significant manufacturing and research facilities in the United States in a way which will provide short- and long-term benefits to the U.S. economy and the industrial competitiveness of such companies.

The preferred benefit to the U.S. economy is the creation and maintenance of manufacturing capabilities and jobs within the United States.

1. Will the Participant(s) agree, as part of the CRADA, to substantially manufacture any products, use any processes, or perform any services in the United States incorporating or resulting from inventions, copyrights, mask works, or protectable data arising from the CRADA work in which the Participant(s) has some commercial rights? Yes \_\_\_ No \_\_\_
2. If no, Participant(s) must furnish a description of specific economic or other benefits to the U.S. economy which are related to the commercial use by Participant(s) of the technology being funded under the CRADA and which are commensurate with the Government's contribution to the proposed work.
3. The above-described agreement and/or description of benefits will be provided by the laboratory to the operations office before submission of the Joint Work Statement.

Such benefits may include one or more of the following:

- Direct or indirect investment in U.S.-based plant and equipment.
- Creation of new and/or higher-quality U.S.-based jobs.
- Enhancement of the domestic skills base.
- Further domestic development of the technology.
- Significant reinvestment of profits in the domestic economy.
- Positive impact on the U.S. balance of payments in terms of product and service exports as well as foreign licensing royalties and receipts.

- Appropriate recognition of U.S. taxpayer support for the technology; e.g., a quid-pro-quo commensurate with the economic benefit that would be domestically derived by the U.S. taxpayer from U.S.-based manufacture.
- Cross-licensing, sublicensing, and reassignment provisions in licenses which seek to maximize the benefits to the U.S. taxpayer.

### **Attachment 3**

## **ABSTRACT FORMAT DESCRIPTION**

**(Character limit for any one field: 2,000)**

**(Character limit for all information: 9,000)**

**Text only; no diagrams or flowcharts**

Due to the differences in size and complexity among software packages and the corresponding differences in their respective documentation requirements, a specific form for the required Abstract document has not been provided. Instead, this Abstract Format Description contains a listing of the data elements required for the Abstract and a brief description of each data element. The person assembling the submittal package is expected to create the Abstract document using a text editor. Please note that each of the listed data elements is REQUIRED, and a response for each data element MUST be included in the completed Abstract document.

- I. Identification. Provide the following two fields to be used to uniquely identify the software. The software acronym plus the short or KWIC (keywords in context) title will be combined to be used as the identification of the software.

Software Acronym (limit 20 characters). The name given to the main or major segment of module packaged usually becomes the name of the code package. If an appropriate name is not obvious, invent one which is related to the contents.

Short or KWIC title (limit 80 characters). This title should tell something of the nature of the code system: calculational method, geometry, or any feature that distinguishes this code package from another. It should be telegraphic in style, with no extraneous descriptors, but more than a string of keywords and phrases. The word "code" (alone) and "program" do not belong in a description of a code "package."

2. Author Name(s) and Affiliations. List author(s) or contributor(s) names followed by the organizational affiliation. If more than one affiliation is applicable, please pair authors with their affiliations.
3. Software Completion Date. List approximate date(s) that the version of the executable module(s), which will be created by the submitted program modules, was first used in an application environment.
4. Brief Description. Briefly describe the purpose of the computer program, state the problem being solved, and summarize the program functions and capabilities. This will be the primary field used for announcement purposes.

5. Method of Solution. Provide a short summary of the mathematical methods, engineering principles, numerical algorithms, and procedures incorporated into the software.
6. Computer(s) for Which Software Is Written. List the computer(s), i.e., IBM3033, VAX6220, VAX, IBM PC, on which this submittal package will run.
7. Operating System. Indicate the operating system used, release number, and any deviations or exceptions, i.e., is the operating system “off the shelf” with no modifications, or has the operating system been modified/customized. If modified, note modifications in field 11.
8. Programming Language(s) Used. Indicate the programming language(s) in which the software is written along with the approximate percentage (in parentheses) of each used. For example, FORTRAN IV (95%); Assembler (5%).
9. Software Limitations. Provide a short paragraph on any restrictions implied by storage allocation, such as the maximum number of energy groups and mesh points, as well as those due to approximations used, such as implied argument-range limitations. Also to be used to indicate the maximum number of users, etc. or other limitations.
10. Unique Features of the Software. Highlight the advantages, distinguishing features, or special capabilities which may influence the user to select this package over a number of similar packages.
11. Related and Auxiliary Software. If the software supersedes or is an extension of earlier software, identify the original software here. Identify any programs not considered an integral part of this software but used in conjunction with it (e.g., for preparing input data, plotting results, or coupled through use of external data files). Note similar library software, when known.
12. Other Programming or Operating Information or Restrictions. Indicate file naming conventions used, e.g., (filename).DOC (DOC is a filename extension normally used to indicate a documentation file), additional subroutines, function libraries, installation support software, or any special routines required for operation of this package other than the operating system and programming language requirements listed in other fields. If proprietary software is required, this should also be indicated.
13. Hardware Requirements. List hardware and installation environment requirements necessary for full utilization of the software. Include memory and RAM requirements, in addition to any nonstandard features.
14. Time Requirements. Include any timing requirement estimations, both wall clock and computer clock, necessary for the execution of the package. Give enough detail to enable the potential user to estimate the execution time for a given choice of program parameters (e.g., 5-10 min.).

15. References. List citations of pertinent publications. List (by author, title, report number, bar code or order number if available, and date). References are to be broken down into two groupings:
  - a. Reference documents that are provided with the submittal package.
  - b. Any additional background reference materials generally available.
16. Categorization and Keywords.
  - a. Subject Classification Code - Chosen from the Subject Classification Guide (Appendix E of ESTSC--I), this one-letter code designation is to be supplied by the submitter.
  - b. Keywords - Submitters should include keywords as taken from the ESTSC thesaurus listing (Appendix F of ESTSC--I). Keywords chosen that are not on the list will be subject to ESTSC approval before being added to the thesaurus. Subsequent revision lists will be available. ESTSC may also add additional keywords to aid in the indexing of the material.

c. EDB Subject Categories - Energy-related categories (6-digit) to be assigned by ESTSC per the Energy Science and Technology Database (EDB) schema for a further breakdown of subject area.

17. Sponsor. This field, input by ESTSC from information provided on the Primary Submittal Form, represents the program office or division responsible for funding the software.
18. Material Available. This field, input by ESTSC, is taken from information provided on the submittal forms. It will be composed of:
  - a. Contents of the package available for distribution.
  - b. Computer media quantity.
19. Status. This field, input by ESTSC for submittals other than from SIACs, consists of a dialog of information concerning: when the package was announced; subsequent versions and dates; what level of testing has been performed at NESL, SIACs, or ESTSC; etc.

Note: The box above indicates data elements that will be determined by ESTSC, consisting of data extracted from other information provided within the submittal package.