U.S. Department of Energy
Washington, D.C.

ORDER

DOE O 483.1

Approved: 01-12-01
Sunset Review: 01-12-03
Expiration: 01-12-05

SUBJECT: DOE COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS

1. OBJECTIVES.

   a. To establish Department of Energy (DOE) policy, requirements, and responsibilities for the oversight, management, and administration of Cooperative Research and Development Agreement (CRADA) activities at DOE facilities.

   b. Through the use of CRADAs, consistent with the terms of the facility contract or delegation of authority, DOE and its facilities will—

      (1) facilitate the efficient and expeditious development, transfer, and exploitation of Federally owned or originated technology to non-DOE entities for the public benefit and to enhance the accomplishment of DOE missions;

      (2) leverage DOE resources, through its programs and facilities, through partnering; and

      (3) ensure fairness of opportunity, protect the national security, promote the economic interests of the United States, and provide a variety of means to respond to private-sector concerns and interests about facility technology partnering activities.

   c. To ensure that DOE and its facilities—

      (1) carry out CRADA activities in accordance with applicable laws and authorities (CRADAs are an important tool to fulfill the objectives of technology partnering, as provided for in DOE O 482.1, DOE FACILITIES TECHNOLOGY PARTNERING PROGRAMS);

      (2) ensure consistent development and application of policy and procedures in planning and conducting CRADA activities at DOE facilities; and

      (3) ensure the availability of timely and accurate CRADA data and information to monitor, evaluate, and describe DOE CRADA activities.

2. CANCELLATION. None.

3. APPLICABILITY.

a. DOE Elements. The provisions of this Order apply to all Departmental organizational elements negotiating all aspects of and entering into CRADAs performed under Title 15 United States Code (U.S.C.), Section 3710a. Government- Owned, Contractor-Operated (GOCO) facility contractors are authorized to enter into CRADAs by Department of Energy Acquisition Regulation (DEAR) 970.5204-40, Technology Transfer Mission clause, or Government-Owned, Government-Operated (GOGO) facilities by delegation of authority.

b. Contractors. The Contractor Requirements Document (CRD), Attachment 1, sets forth requirements for all DOE facility contractors negotiating and entering into CRADAs performed under the National Competitiveness Technology Transfer Act of 1989. Contractor compliance with the CRD is required to the extent set forth in the contractor's contract.

4. REQUIREMENTS. The following requirements apply to DOE facilities entering into CRADA activities (see DEAR 970.73 and DOE M 483.1-1, DOE COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS MANUAL):

a. The proposed work is expected to result in a benefit consistent with the program missions at the facility and the facility's mission established by the cognizant secretarial officer (CSO).

b. The proposed work represents a collaboration with a non-Federal partner in specified research or development efforts that is consistent with the missions of the facility. The non-Federal party contribution must be more than financial and/or equipment or the development of a statement of work.

c. Guidelines and further detail on the requirements can be found in DOE M 483.1-1.

d. In conducting its CRADA activities, the facility must prepare procedures and take all reasonable measures to ensure widespread notice of availability of technologies suited for transfer and for opportunities for exclusive licensing and joint research arrangements.

e. Activities must be conducted in a manner that does not compromise the national security, economic, and environmental interests of the United States.

f. Export control reviews must be performed in accordance with facility contracts and DOE policy. CRADA activities can result in information and technologies that may be subject to export controls. This export-controlled information (ECI) may or may not also fall under

such categories as Classified information or Unclassified Controlled Nuclear Information (UCNI). The information and/or technology may become ECI at any stage.

g. Information and data that are commercially valuable may be developed, including some that may have intellectual property rights associated with it. Consistent with applicable statutes, such information may be considered for protection from public dissemination, for a period not to exceed 5 years, to retain its commercial value and provide an incentive for its commercial application.

h. DOE employees and contractors, in accordance with the provisions of facility contracts, must protect proprietary information and data provided by private-sector collaborators and sponsors in the conduct of CRADA activities.

5. RESPONSIBILITIES. (See Attachment 2, DOE Facilities/Labs Listing by Field Office.)

a. Under Secretary for Energy, Science, and Environment in Consultation with the Under Secretary for Nuclear Security.

(1) Subject to the Secretary's direction, recommends to and coordinates policy and provides overall guidance for CRADA activities, and recommends appropriate delegations of authority for carrying out such policy and guidance.

(2) Serves as the focal point and provides leadership for developing policies and procedures, resolving CRADA partnering issues, and ensuring effective implementation of existing policies.

b. The Research and Development (R&D) Council, acting through the Under Secretary.

(1) Provides recommendations regarding policy and procedures for the conduct and coordination of CRADA activities by DOE facilities.

(2) Provides an interagency coordination point for CRADA activities at DOE facilities, as appropriate.

(3) Provides guidance to CSOs for the preparation and submission of reports, such as the annual DOE Report to Congress on technology partnering program activities.

(4) Coordinates the preparation of annual facility technology partnering program reports.

c. Lead Program Secretarial Officers.

(1) Have primary oversight, management, and administrative responsibility for sitewide coordination and integration of CRADA activities by the field offices under their lead.

(2) Ensure that the each field office manager completes an appraisal of the performance of the CRADA activities at each of the facilities under their cognizance.

d. Cognizant Secretarial Officers.

(1) Exercise primary oversight, management, and administrative responsibility for CRADA activities at facilities under their cognizance.

(2) For facilities under their cognizance, provide general guidance in accordance with the terms of the facility contract or delegation of authority.

(3) Ensure the availability of timely and accurate data and information about CRADAs from facilities under their cognizance for satisfying DOE reporting and information requirements.

(4) Ensure that the management and performance of CRADA activities at the facilities under their cognizance are appraised.

e. Program Secretarial Officers.

(1) Exercise primary programmatic responsibility for the implementation of CRADA activities for their programs.

(2) Support the CSO in the execution of the CSO's institutional responsibilities, by providing programmatic, mission area, and technical expertise in the resolution of CRADA issues.

f. Director, Office of Policy. Responsible for CRADA policy coordination, as provided in DOE O 482.1 and DOE M 483.1-1, and in accordance with overall guidance from the Under Secretary for Energy, Science, and Environment in consultation with the Under Secretary for Nuclear Security and the R & D Council.

g. Assistant General Counsel for Technology Transfer and Intellectual Property.

(1) Provides DOE legal advice and representation on issues related to the CRADA program.

(2) Establishes policy on intellectual property rights, advises and provides guidance on intellectual property provisions for CRADAs and the CRADA Manual, and approves waivers of patent rights and of any disposition of other intellectual property rights.

h. Heads of Field Elements.

(1) Oversee CRADA activities conducted in DOE facilities under their purview. In this capacity, heads of field elements are accountable to the CSO.

(2) Ensure that facilities under their purview carry out their CRADA activities in accordance with applicable laws, regulations, and delegations of authority.

(3) Develop and implement local procedures for the review and approval of CRADA documents, monitoring, and reporting of CRADA activities consistent with legislation, DOE policies, and procedures.

(4) In coordination with the CSO and PSOs, conduct reviews and appraisals of CRADA activities at facilities under their cognizance.

(5) Notify appropriate Headquarters elements in accordance with the notification criteria in DOE M 483.1-1 and guidance from the CSO.

(6) Ensure DOE and/or contractor review of proposed CRADA activities involving human and/or animal subjects for compliance with the established regulations for protection of these subjects, as appropriate.

(7) Ensure that CRADA activities under their purview are conducted in accordance with applicable security, safeguards, and classification policies, as appropriate.

(8) Ensure DOE and contractor review of CRADA activities for compliance with DOE environmental, safety, and health requirements, including requirements of the National Environmental Protection Act, as appropriate.

(9) Consistent with the policies and procedures of the Department regarding CRADA activities, establish performance goals and measures to assess field performance and effectiveness of local CRADA processes and impacts of subsequent improvements and/or additional requirements.

(10) Ensure that summary information is maintained sufficient to respond to reporting requirements and to respond to requests for information from DOE Headquarters or outside entities.

i. Office of Intelligence, consistent with policies and guidelines contained within this Order:

(1) Establishes procedures for all CRADA activities concerning intelligence and intelligence-related programs.

(2) Approves all CRADA activities for the intelligence-related programs.

j. Office of Counterintelligence (OCI), consistent with policies and guidelines contained within this Order:

a. Establishes procedures for CRADA activities involving classified and/or sensitive but unclassified technology. The list of sensitive subjects is maintained by the Office of Defense Nuclear Nonproliferation.

b. Establishes procedures for CRADA activities involving foreign participants.

6. REFERENCES.

a. Stevenson-Wydler Technology Innovation Act of 1980, Public Law 96-480 (15 U.S.C. 3701 et seq.), established Offices of Research and Technology Applications (ORTAs) at Federal Laboratories.

b. Bayh-Dole Act of 1980, Public Law 96-517 (35 U.S.C. 200 et seq.), gives small businesses and nonprofit contractors the right to elect title to inventions made under funding agreements, with the Government retaining a license; provides for march-in rights and U.S. industry preference; and contains provisions relating to licensing of inventions.

c. Section 152 of the Atomic Energy Act of 1954, Public Law 83-703 (42 U.S.C. 2182), addresses the disposition of title to inventions useful in the production or utilization of special nuclear material or atomic energy made under DOE contracts, etc., and the waiver of title to such inventions to contractors.

d. Section 9 of the Federal Nonnuclear Energy Research and Development Act of 1974, Public Law 93-577 (42 U.S.C. 5908), addresses the disposition of title to nonnuclear inventions made under DOE contracts, etc., and the waiver of title to such inventions to contractors.

e. Executive Order 12591, dated April 10, 1987, "Facilitating Access to Science and Technology," requires that Executive departments and agencies, to the extent permitted by law, transfer Federally funded technology to the commercial sector and specifically addresses GOGOs entering into CRADAs and licensing, assigning, and waiving intellectual property developed under such CRADAs.

f. Section 33 of the Atomic Energy Act of 1954, Public Law 83-703 (42 U.S.C. 2051), provides for the dissemination of scientific and technical information.

g. Freedom of Information Act, Public Law 89-487 (5 U.S.C. 552 et seq.), provides for public access to Federal agency records, which would include records containing scientific and technical information created with Federal funding.

h. Trademark Clarification Act of 1984, Public Law 98-620, extended the contractors' right to elect title to inventions provided by the Bayh-Dole Act to DOE's GOCO contractors.

i. Federal Technology Transfer Act of 1986, Public Law 99-502, authorizes CRADAs for GOGOs, establishes the Federal Laboratory Consortium for Technology Transfer, and allows GOGO laboratories to negotiate licensing agreements for inventions made at his/her laboratories.

j. National Competitiveness Technology Transfer Act of 1989, Public Law 101-189, establishes technology transfer as a laboratory mission and permits GOCOs to enter into CRADAs.

k. National Technology Transfer and Advancement Act of 1995, Public Law 104-113, provides the CRADA collaborating party an option for reasonable compensation when appropriate to choose an exclusive license for a prenegotiated field of use in any invention made in whole or in part by a laboratory employee under the CRADA.

l. National Defense Authorization Act of 1999, Public Law 105-261, provides for the Secretary of Energy to impose a Federal Administrative Charge (which includes any depreciation and imputed interest charges) in an amount not to exceed 3 percent of the full cost incurred in carrying out the research and activities on behalf of non-Departmental persons and entities.

m. DOE M 483.1-1, DOE COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS, provides detailed requirements to supplement this Order.

n. DOE O 482.1, DOE FACILITIES TECHNOLOGY PARTNERING PROGRAMS, provides roles and responsibilities for the oversight, management and administration of technology partnerships and associated mechanisms.

7. CONTACT. For information about this Order, contact the Office of Policy at 202-586-3900.

8. DEFINITIONS.

a. Cognizant Secretarial Officer. The Assistant Secretary/Director responsible for a bounded set of facilities or laboratories, as identified in Attachment 2.

b. Cooperative Research and Development Agreement (CRADA). Any agreement between one or more Federal facilities and one or more non-Federal parties under which the Government, through its facilities, provides personnel, services, facilities, equipment, intellectual property, or other resources with or without reimbursement (but not funds to non-Federal parties) and the non-Federal parties provide funds, personnel, services, facilities, equipment, intellectual property, or other resources toward the conduct of specified research or development efforts which are consistent with the mission of the facility; except that such terms do not include a procurement contract or cooperative agreement.

c. DOE Facility. Government-owned laboratory or production facility or other facility operated under DOE program cognizance.

d. Heads of Field Elements. Managers of operations/field offices and directors of GOGOs. Heads of field elements report directly to the lead program secretarial officer and have line accountability for all site program/project execution and contract management.

e. DOE Facility Contractor. Entity that operates and maintains a DOE facility under contract with and for the benefit of DOE and has the responsibility to conduct technology partnering activities.

f. Lead Program Secretarial Officer. An Assistant Secretary/Director to whom assigned field offices directly report and who has overall ownership responsibility for the field offices, as identified in Attachment 2.

g. Licensing. The transfer of less than ownership rights in intellectual property, such as a patent or a software copyright, to permit its use by the licensee.

h. Operations/Field Office Manager. An individual who reports directly to the lead program secretarial officer and has line accountability for all site program/project execution and contract management.

i. Program Secretarial Officer. An Assistant Secretary/Director who funds work at a particular site or laboratory via a "customer" relationship with the field element.

j. Research and Development (R&D) Council. A senior-level, DOE-wide coordinating body that focuses on cross-cutting R&D and related science and technology (S&T) policy

and management issues. When designated by the Secretary, the Under Secretary for Energy, Science and Environment serves as the Chair of the R&D Council. The R&D Council, through its designated Chair, and in consultation with the Under Secretary of Nuclear Security, assists the Secretary and Deputy Secretary in addressing and resolving issues common to more than one DOE R&D organization; coordinating the implementation of DOE-wide R&D management activities, including R&D portfolio management and analysis and the development and coordination of technology partnering policy and procedure; and in facilitating liaison activities with organizations external to the DOE on R&D and S&T matters. Members of the R&D Council include the Chief Financial Officer, the Director of the Office of Policy, and the heads of DOE organizations responsible for R&D programs, including—

- the Deputy Administrators for Defense Programs, Defense Nuclear Non-Proliferation, and Naval Reactors;
- the Assistant Secretaries for Energy Efficiency and Renewable Energy, Fossil Energy, and Environmental Management; and
- the Directors of the Offices of Science; Nuclear Energy, Science, and Technology; Civilian Radioactive Waste Management; and Security and Emergency Operations.

BY ORDER OF THE SECRETARY OF ENERGY:

T.J. GLAUTHIER
Deputy Secretary

CONTRACTOR REQUIREMENTS DOCUMENT

DOE O 483.1, DOE COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS

1. Establish and maintain a management system, including policy and procedures, that ensures Cooperative Research and Development Agreement (CRADA) activities requirements of DOE O 483.1, DOE COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS, and DOE M 483.1-1, COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT MANUAL, are satisfied.

2. Develop in conjunction with the heads of field elements appropriate performance measures for CRADA activities and participate in DOE's Performance-Based Business Management Process (DOE O 224.1, CONTRACTOR PERFORMANCE-BASED BUSINESS MANAGEMENT PROCESS) or other appraisals in accordance with the facility contract.

3. Submit to DOE, CRADAs and JWSs for review and approval unless the DOE Contracting Officer has the statutory authority to delegate these functions to the contractor and the DOE Contracting Officer elects to make the delegation in accordance with DOE policy.

4. Review proposed work involving human and/or animal subjects for compliance with established regulations for protection of these subjects.

5. Review projects for compliance with DOE environmental, safety, and health requirements, including the National Environmental Protection Act.

6. Ensure projects are protected in accordance with applicable security, safeguards, and classification policies and procedures, including the site security plan or supplemental security plan specific to a project.

7. Ensure contractor employees protect proprietary information and data provided by private sector collaborators and sponsors in the conduct of CRADA activities.

8. Request DOE approval for construction at a DOE site when that construction exceeds the general plant project threshold. Approval by the cognizant Secretarial Officer and the Chief Financial Officer is required prior to initiation of work which exceeds the threshold.

9. Maintain a project summary listing of information on each active CRADA project.

10. Maintain project file information documenting policy compliance.

11. Submit information on CRADAs as part of the annual Technology Partnering Report.

DOE FACILITIES AND LABORATORIES LPSO AND CSO ASSIGNMENTS BY FIELD OFFICE

May 31, 2000

Field Office	LPSO	Facility/Laboratory	CSO	PSOs Operating Programs
Albuquerque (AL) NNSA Field Manager	DP	Los Alamos National Laboratory (LANL)	DP	DP/NN/SC/EM/EE/FE/NE/RW
		Sandia National Laboratory (SNL)	DP	DP/NN/SC/EM/EE/FE/NE/RW
		Pantex Plant	DP	DP/EM/NN
		Kansas City Plant	DP	DP/EM/NN
		Grand Junction Project Office (GJPO)	EM*	DP/EM/SC
		Waste Isolation Pilot Project (WIPP)	EM*	EM
Chicago (CH) DOE Field Manager	SC	Argonne National Laboratory - East (ANL-E)	SC	SC/NE/EM/EE/DP/FE/NN/RW
		Brookhaven National Laboratory (BNL)	SC	SC/NN/EM/EE/NE/DP/FE
		Ames Laboratory	SC	SC/EM/FE/EE/NN
		Princeton Plasma Physics Laboratory (PPPL)	SC	SC/EM
		Fermi National Accelerator Laboratory	SC	SC
		New Brunswick Laboratory (NBL)	SO*	SC/NE/NN
		Environmental Measurements Laboratory (EML)	EM	SC/EM/NN
Idaho (ID) DOE Field Manager	EM	Idaho National Engineering and Environmental Laboratory (INEEL)	EM	SC/EE/DP/NN/NE/EM/FE
		Test Reactor Area	NE*	EM/NE/NR
		Radiological and Environmental Laboratory (RESL)	EM	EM
		Argonne National Laboratory - West (ANL-W) [1]	NE*	NE/NN/EM
Nevada (NV) NNSA Field Manager	DP	Nevada Test Site	DP	DP/RW/NN/EM
		Yucca Mountain Site (YMSCO)[2]	RW*	RW
Oak Ridge (OR) DOE Field Manager	SC	Oak Ridge National Laboratory (ORNL)	SC	SC/NN/EM/EE/DP/FE/NE
		Paducah/Portsmouth	NE*	EM/NE
		ETTP, K-25, Weldon Spring, etc.	EM*	SC/EM
		Thomas Jefferson National Accelerator Facility (TJNAF)	SC	SC
NNSA Field Manager		Y-12	DP*	SC/DP/NN
Oakland (OAK) DOE Field Manager	SC	Lawrence Berkeley National Laboratory (LBNL)	SC	SC/EM/EE/DP/RW/NN/FE
		Stanford Linear Accelerator Center (SLAC)	SC	SC/EM
		Energy Technology Engineering Center (ETEC)	EM	SC/EM
NNSA Field Manager		Lawrence Livermore National Laboratory (LLNL)	DP*	DP/EM/RW/SC/NN/NE/EE/FE/MA
Office of River Protection (ORP)6+ DOE Field Manager	EM	Office of River Protection (ORP)	EM	EM

* Instances where the CSO is not the LPSO and a MOU is required

1 Reports through the Chicago Operations Office

2 Reports directly to the Office of Civilian Radioactive Waste Management

DOE FACILITIES AND LABORATORIES LPSO AND CSO ASSIGNMENTS BY FIELD OFFICE

May 31, 2000
(continued)

Field Office	LPSO	Facility/Laboratory	CSO	PSOs Operating Programs
Ohio DOE Field Manager	EM	Mound Environmental Management Project Space Power Systems (MEMP) Fernald Environmental Management Project (FEMP) West Valley Demonstration Project (WVDP) Ashtabula Environmental Management Project (AEMP) Columbus Environmental Management Project (CEMP)	EM NE* EM EM EM EM	EM EM/NE EM EM EM EM
Richland (RL) DOE Field Manager	EM	Hanford Site Pacific Northwest National Laboratory (PNNL) Fast Flux Test Facility	EM SC* NE*	EM/NN/NE SC/DP/EE/FE/EM/NN/NE EM/NE
Rocky Flats (RF) DOE Field Manager	EM	Rocky Flats Environmental Technology Site (RFETS)	EM	EM
Savannah River (SR) DOE Field Manager NNSA Field Manager	EM	Savannah River Site (SRS) Fissile Material Disposition Facilities Tritium Facilities	EM NN DP	EM/DP/NN EM EM/DP
National Energy Technology Laboratory (NETL) DOE Field Manager	FE	Morgantown Site Pittsburgh Site	FE FE	FE/EE/EM/NE/NN FE/EE/EM/NE/NN
Albany Research Center DOE Field Manager	FE	Albany Research Center	FE	FE/EE/EM/NE/NN
National Petroleum Technology Office (NTPO) DOE Field Manager	FE	National Petroleum Technology Office (NTPO)	FE	FE/EE/EM/NE/NN
Golden Field Office (GFO) DOE Field Manager	EE	National Renewable Energy Laboratory (NREL)	EE	EE/SC
Naval Petroleum Reserves (NPR) DOE Field Manager		FE Naval Petroleum Reserves (NPR) Naval Oil Shale Reserves (NOSR) Rocky Mountain Oil Field Testing Center (RMOTC)	FE FE FE	FE FE FE

* Instances where the CSO is not the LPSO and a MOU is required

3 Facility located on the Idaho Environmental Engineering Laboratory Site; MOA with Idaho Operations Office required.

DOE FACILITIES AND LABORATORIES LPSO AND CSO ASSIGNMENTS BY FIELD OFFICE

May 31, 2000
(continued)

Field Office	LPSO	Facility/Laboratory	CSO	PSOs Operating Programs
Pittsburgh Naval Reactors Office (PNRO) NNSA Field Manager	NR	Bettis Atomic Power Laboratory (BAPL) Naval Reactor Facility (NRF)[3]	NR NR	NR NR*
Schenectady Naval Reactors Office NNSA Field Manager	NR	Knolls Atomic Power Laboratory (KAPL)	NR	NR
Strategic Petroleum Reserve Project Management Office (SPRO) DOE Project Manager	FE	Oil Supply Distribution Facilities Bryan Mound Bill Hill Bayou Choctaw Weeks Island West Hackberry	FE	FE

* Instances where the CSO is not the LPSO and a MOU is required