

Defense Federal Acquisition Regulation Supplement

Part 235—Research and Development Contracting

(Revised April 16, 1999)

235.001 Definitions.

As defined in DoD 7000.14-R, Financial Management Regulation, and as used in this part—

(a) “Basic research” (Category 6.1) means all effort of scientific study and experimentation directed toward increasing knowledge and understanding in those fields of the physical, engineering, environmental, and life sciences related to long-term national security needs. It provides farsighted, high-payoff research, including critical enabling technologies that provide the basis for technological progress. It forms a part of the base for (1) subsequent applied research (exploratory development) and advanced technology developments in Defense-related technologies; and (2) new and improved military functional capabilities in areas such as communications, detection, tracking, surveillance, propulsion, mobility, guidance and control, navigation, energy conversion, materials and structures, and personnel support.

(b) “Applied research” (Category 6.2) means effort that translates promising basic research into solutions for broadly defined military needs, short of major development projects. This type of effort may vary from fairly fundamental applied research to sophisticated bread-board hardware, study, programming, and planning efforts that establish the initial feasibility and practicality of proposed solutions to technological challenges. It includes studies, investigations, and nonsystem specific development efforts. The dominant characteristic of this category of effort is that it be pointed toward specific military needs with a view toward developing and evaluating the feasibility and practicability of proposed solutions and determining their parameters.

(c) “Advanced technology development” (Category 6.3A) means all efforts that have moved into the development and integration of hardware for field experiments and tests. The results of this type of effort are proof of technological feasibility and assessment of operability and producibility rather than the development of hardware for Service use. Projects in this category have a direct relevance to identified military needs. Advanced technology development is system specific (particularly for major platforms, i.e., aircraft, ships, missiles, and tanks, etc.) and includes advanced technology development that is used to demonstrate the general military utility or cost reduction potential of technology when applied to different types of military equipment or techniques. Advanced technology development also includes evaluation and synthetic environment and proof-of-principle demonstrations in field exercises to evaluate system upgrades or provide new operational capabilities.

(d) “Demonstration and validation” (Category 6.3B) means all efforts necessary to evaluate integrated technologies in as realistic an operating environment as possible to assess the performance or cost reduction potential of advanced technology. The demonstration and validation phase is system specific and also includes advanced technology demonstrations that help expedite technology transition from the laboratory to operational use.

(e) “Engineering and manufacturing development” (Category 6.4) means those projects in engineering and manufacturing development for Service use but that have not received approval for full-rate production. This area is characterized by major line

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item projects, and program control will be exercised by review of individual projects. Engineering development includes engineering and manufacturing development projects consistent with the definitions within DoDD 5000.1

(f) “Management support” (Category 6.5) means research and development effort directed toward support of installations or operations required for general research and development use. Included would be test ranges, military construction, maintenance support of laboratories, operation and maintenance of test aircraft and ships, and studies and analyses in support of the research and development program. Costs of laboratory personnel, either in-house or contractor-operated, would be assigned to appropriate projects or as a line item in the basic research, applied research, or advanced technology development program areas, as appropriate.

(g) “Operational system development” (Category 6.6) means those development projects, in support of development acquisition programs or upgrades, still in engineering and manufacturing development (DoDD 5000.1) but that have received approval for production through Defense Acquisition Board or other action, or for which production funds have been included in the DoD budget submission for the budget or subsequent fiscal year. All items in this area are major line item projects that appear as research, development, test, and evaluation costs of weapon system elements in other programs. Program control will be exercised by review of individual projects.

(h) “Research and development” ordinarily covers only the following categories:

- (1) Basic research.
- (2) Applied research.
- (3) Technology development.
- (4) Demonstration/validation.
- (5) Engineering and manufacturing development.
- (6) Operational system development.

235.006 Contracting methods and contract type.

(b)(i) Do not award a fixed-price type contract for a development program effort unless—

- (A) The level of program risk permits realistic pricing;
- (B) The use of a fixed-price type contract permits an equitable and sensible allocation of program risk between the Government and the contractor; and
- (C) A written determination that the criteria of paragraphs (b)(i)(A) and (B) of this section have been met is executed—
 - (1) By the Under Secretary of Defense (Acquisition and Technology) (USD(A&T)) for—

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(i) Research and development for non-major systems, if the contract is over \$25 million;

(ii) The lead ship of a class; or

(iii) The development of a major system (as defined in FAR 2.101) or subsystem thereof, if the contract is over \$25 million; or

(2) By the contracting officer for any development not covered by paragraph (b)(i)(C)(1) of this section.

(ii) Obtain USD(A&T) approval of the Government's prenegotiation position before negotiations begin, and obtain USD(A&T) approval of the negotiated agreement with the contractor before the agreement is executed, for any action that is—

(A) An increase of more than \$250 million in the price or ceiling price of a fixed-price type development contract, or a fixed-price type contract for the lead ship of a class;

(B) A reduction in the amount of work under a fixed-price type development contract or a fixed-price type contract for the lead ship of a class, when the value of the work deleted is \$100 million or more; or

(C) A repricing of fixed-price type production options to a development contract, or a contract for the lead ship of a class, that increases the price or ceiling price by more than \$250 million for equivalent quantities.

(iii) Notify the USD(A&T) of an intent not to exercise a fixed-price production option on a development contract for a major weapon system reasonably in advance of the expiration of the option exercise period.

235.006-70 Manufacturing Technology Program.

(a) This subsection implements 10 U.S.C. 2525(d).

(b) Award all contracts under the Manufacturing Technology Program (see DoDI 4200.15, Manufacturing Technology Program) using competitive procedures.

(c) (1) Use a cost-sharing arrangement (see FAR 16.303) for contracts awarded under the Manufacturing Technology Program, unless the USD(A&T) makes a determination that the contract is for a program that—

(i) Is not likely to have any immediate and direct commercial application;

(ii) Is of sufficiently high risk to discourage cost sharing by non-Federal Government sources; or

(iii) Will be carried out by an institution of higher education.

(2) Document the contract file with the rationale for any determination made in accordance with paragraph (c)(1) of this subsection.

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(d) For each contract entered into on a cost-sharing basis, determine the ratio of contractor cost to Government cost by competitive procedures, i.e., each offeror must propose the ratio as part of its proposal. If only one offer is received, negotiate the ratio that provides the best value to the Government.

235.007 Solicitations.

(g) To ensure that prospective offerors fully understand the details of the work, the contracting officer may include the Government's estimate of the man-year effort under a research contract.

235.010 Scientific and technical reports.

(b) The Defense Technical Information Center (DTIC) is responsible for collecting all scientific or technological observations, findings, recommendations, and results derived from DoD endeavors, including both in-house and contracted efforts. The DTIC has eligibility and registration requirements for use of its services. Requests for eligibility and registration information should be addressed to DTIC-BCS, 8725 John J. Kingman Road, Suite 0944, Fort Belvoir, VA 22060-0944.

235.015 Contracts for research with educational institutions and nonprofit organizations.

(b) *Basic agreements.*

(3) When using a basic agreement—

- (i) Incorporate it by reference in Section I of the contract; and
- (ii) Incorporate any special clause requirements in Section H.

235.015-70 Special use allowances for research facilities acquired by educational institutions.

(a) *Definitions.* As used in this subsection—

(1) “Research facility” means—

- (i) Real property, other than land; and
- (ii) Includes structures, alterations, and improvements, acquired for the purpose of conducting scientific research under contracts with departments and agencies of the DoD.

(2) “Special use allowance” means a negotiated direct or indirect allowance—

- (i) For construction or acquisition of buildings, structures, and real property, other than land; and
- (ii) Where the allowance is computed at an annual rate exceeding the rate which normally would be allowed under FAR Subpart 31.3.

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(b) *Policy.*

(1) Educational institutions are to furnish the facilities necessary to perform defense contracts. FAR 31.3 governs how much the Government will reimburse the institution for the research programs. However, in extraordinary situations, the Government may give special use allowances to an educational institution when the institution is unable to provide the capital for new laboratories or expanded facilities needed for defense contracts.

(2) Decisions to provide a special use allowance must be made on a case-by-case basis, using the criteria in paragraph (c) of this subsection.

(c) *Authorization for special use allowance.* The head of a contracting activity may approve special use allowances only when all of the following conditions are met—

(1) The research facility is essential to the performance of DoD contracts;

(2) Existing facilities, either Government or nongovernment, cannot meet program requirements practically or effectively;

(3) The proposed agreement for special use allowances is a sound business arrangement;

(4) The Government's furnishing of Government-owned facilities is undesirable or impractical; and

(5) The proposed use of the research facility is to conduct essential Government research which requires the new or expanded facilities.

(d) *Application of the special use allowance.*

(1) In negotiating a special use allowance—

(i) Compare the needs of DoD and of the institution for the research facility to determine the amount of the special use allowance;

(ii) Consider rental costs for similar space in the area where the research facility is or will be located to establish the annual special use allowance;

(iii) Do not include or allow—

(A) The costs of land; or

(B) Interest charges on capital;

(iv) Do not include maintenance, utilities, or other operational costs;

(v) The period of allowance generally will be—

(A) At least ten years; or

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(B) A shorter period if the total amount to be allowed is less than the construction or acquisition cost for the research facility;

(vi) Generally, provide for allocation of the special use allowance equitably among the Government contracts using the research facility;

(vii) Special use allowances apply only in the years in which the Government has contracts in effect with the institution. However, if in any given year there is a reduced level of Government research effort which results in the special use allowance being excessive compared to the Government research funding, a separate special use allowance may be negotiated for that year;

(viii) Special use allowances may be adjusted for the period before construction is complete if the facility is partially occupied and used for Government research during that period.

(2) A special use allowance may be based on either total or partial cost of construction or acquisition of the research facility.

(i) When based on total cost neither the normal use allowance nor depreciation will apply—

(A) During the special use allowance period; and

(B) After the educational institution has recovered the total construction or acquisition cost from the Government or other users.

(ii) When based on partial cost, normal use allowance and depreciation—

(A) Apply to the balance of costs during the special use allowance period to the extent negotiated in the special use allowance agreement; and

(B) Do not apply after the special use allowance period, except for normal use allowance applied to the balance.

(3) During the special use allowance period, the research facility—

(i) Shall be available for Government research use on a priority basis over nongovernment use; and

(ii) Cannot be put to any significant use other than that which justified the special use allowance, unless the head of the contracting activity, who approved the special use allowance, consents.

(4) The Government will pay only an allocable share of the special use allowance when the institution makes any substantial use of the research facility for parties other than the Government during the period when the special use allowance is in effect.

(5) In no event shall the institution be paid more than the acquisition costs.

235.016 Broad agency announcement.

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To help achieve the goals of Section 1207 of Pub. L. 99-661 (see Part 226), contracting officers shall—

(1) Whenever practicable, reserve discrete or severable areas of research interest contained in broad agency announcements for exclusive competition among historically black colleges and universities and minority institutions;

(2) Indicate such reservation—

(i) In the broad agency announcement; and

(ii) In the announcement synopsis (see 205.207(d)(v)).

235.017 Federally Funded Research and Development Centers.

(a) *Policy.*

(2) No DoD fiscal year 1992 or later funds may be obligated or expended to finance activities of a DoD Federally Funded Research and Development Center (FFRDC) if a member of its board of directors or trustees simultaneously serves on the board of directors or trustees of a profit-making company under contract to DoD, unless the FFRDC has a DoD-approved conflict of interest policy for its members (Section 8107 of Pub. L. 102-172 and similar sections in subsequent Defense appropriations acts).

235.017-1 Sponsoring agreements.

(c)(4) DoD-sponsored FFRDCs that function primarily as research laboratories (C3I Laboratory operated by the Institute for Defense Analysis, Lincoln Laboratory operated by Massachusetts Institute of Technology, and Software Engineering Institute) may respond to solicitations and announcements for programs which promote research, development, demonstration, or transfer of technology (Section 217, Pub. L. 103-337).

235.070 Indemnification against unusually hazardous risks.

235.070-1 Indemnification under research and development contracts.

(a) Under 10 U.S.C. 2354 and if authorized by the Secretary concerned, or designee under 10 U.S.C. 2356, contracts for research and/or development may provide for indemnification of the contractor or subcontractors for—

(1) Claims by third persons (including employees) for death, bodily injury, or loss of or damage to property; and

(2) Loss of or damage to the contractor's property to the extent that the liability, loss, or damage—

(i) Results from a risk that the contract defines as “unusually hazardous;”

(ii) Arises from the direct performance of the contract; and

(iii) Is not compensated by insurance or other means.

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(b) Clearly define the specific unusually hazardous risks to be indemnified. Submit this definition for approval with the request for authorization to grant indemnification. Include the approved definition in the contract.

235.070-2 Indemnification under contracts involving both research and development and other work.

These contracts may provide for indemnification under the authority of both 10 U.S.C. 2354 and Pub. L. 85-804. Pub. L. 85-804 will apply only to work to which 10 U.S.C. 2354 does not apply. Actions under Pub. L. 85-804 must also comply with FAR Subpart 50.4.

235.070-3 Contract clauses.

When the contractor is to be indemnified in accordance with 235.070-1, use either—

(a) The clause at 252.235-7000, Indemnification Under 10 U.S.C. 2354--Fixed Price; or

(b) The clause at 252.235-7001, Indemnification Under 10 U.S.C. 2354--Cost-Reimbursement, as appropriate.

235.071 Additional contract clauses.

(a) Use the clause at 252.235-7002, Animal Welfare, or one substantially the same, in solicitations and contracts awarded in the United States, its possessions, and Puerto Rico involving research on live vertebrate animals.

(b) Use the clause at 252.235-7003, Frequency Authorization, in solicitations and contracts for developing, producing, constructing, testing, or operating a device requiring a frequency authorization.

(c) Use the clause at 252.235-7010, Acknowledgment of Support and Disclaimer, in solicitations and contracts for research and development.

(d) Use the clause at 252.235-7011, Final Scientific or Technical Report, in solicitations and contracts for research and development.