

Survey of Federal Funds for Research and Development

Version for DOD

| Plea | ise e | enter | the | name | of your | agency | below. |
|------|-------|-------|-----|------|---------|--------|--------|
| | | | | | | | |

Contact information

If you have a question about the survey in general, please contact Mr. Ron Meeks via e-mail at rmeeks@nsf.gov or call 703-292-7787. If you have a question about a specific item in the survey, please contact Mr. Michael Rossi of ORC Macro via e-mail at mrossi@qrc.com or call him at 301-657-3077, extension 178.

Thank you for your participation.

1. What were your agency's outlays for 1) research and development, and 2) R&D plant for fiscal years 2003, 2004, and 2005? (*Report dollars in thousands; if none, enter "0."*)

Please report actual outlays for FY 2003. For FY 2004 and 2005, please provide your best estimate of what these outlays will be.

Definitions for Question 1

Outlays represent the amounts for checks issued and cash payments made during a given period, regardless of when the funds were appropriated.

Research and development (R&D) activities comprise creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications.

Includes:

--Administrative expenses for R&D.

Excludes:

- --Physical assets for R&D such as R&D equipment and facilities.
- --Exclude routine product testing, quality control, mapping, collection of general-purpose statistics, experimental production, routine monitoring and evaluation of an operational program, and the training of scientific and technical personnel.

R&D plant (R&D facilities and fixed equipment, such as reactors, wind tunnels, and particle accelerators) includes acquisitions of, construction of, major repairs to, or alterations in structures, works, equipment, facilities, or land for use in R&D activities at Federal or non-Federal installations. Excluded from this category are expendable or movable equipment (e.g., spectrometers, microscopes) and office furniture and equipment. Also excluded are the cots of predesign studies (e.g., those undertaken before commitment to a specific research facility).

FY 2003 is the fiscal year period October 1, 2002 through September 30, 2003. Similar time periods are used for FY 2004 and FY 2005.

Outlays for research and development activities at your agency

| | FY 2003 (actual) | | FY 2004 (preliminary) | FY 2005 (preliminary) |
|--------------------------|---------------------|---------|--------------------------|--------------------------|
| Research and Development | \$, | ,000 \$ | ,000 | \$,000 |
| R&D Plant | \$, | ,000 \$ | ,000 | \$,000 |
| Total | \$ | ,000 \$ | ,000 | \$,000 |

NOTE: Shaded totals are automatically summed in the web version of this survey.

Definitions for Question 2

New definitions:

Research activities include 1) basic research, and 2) applied research:

Basic research is defined as systematic study directed toward fuller knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications towards processes or products in mind.

Applied research is defined as systematic study to gain knowledge or understanding necessary to determine the means by which a recognized and specific need may be met.

Obligations represent the amounts for orders placed, contracts awarded, services received, and similar transactions during a given period, regardless of when the funds were appropriated or when future payment of money is required.

Development is defined as systematic application of knowledge or understanding, directed toward the production of useful materials, devices, and systems or methods, including design, development, and improvement of prototypes and new processes to meet specific requirements. Development includes both advanced technology development and major systems development.

Advanced technology development represents DoD research category 6.3A and includes all advanced technology development of subsystems/components and includes concept/technology demonstrations of new system concepts. Projects in this category have a direct relevance to identified military needs. These funds are used to demonstrate the general military utility or cost reduction potential of technology when applied to different types of military equipment or techniques. It also includes evaluation and synthetic environment and proof-of-principle demonstrations in field exercises to evaluate system upgrades or provide new operational capabilities. (This category is Budget Activity 3 of the DoD Financial Management Regulation (FMR).)

Major systems development represents DoD research categories 6.3B through 6.6 (demonstration and validation, engineering and manufacturing development, management and support, and operational system development) and Budget Activities 4 through 7 of the DoD Financial Management Regulation (FMR).

Previously defined terms:

R&D plant (See Ouestion 1.)

2. What were your agency's *obligations* for a) basic research, b) applied research, c) advanced technology development, d) major systems development, and e) R&D plant for fiscal years 2003, 2004, and 2005? (*Report dollars in thousands; if none, enter "0."*)

Please report actual obligations for FY 2003. For FY 2004 and 2005, please provide your best estimate of what these obligations will be.

Definitions for Question 2 See page 3.

Obligations for research and development activities at your agency

| | | (A) FY 2003 (actual) | (B) FY 2004 (preliminary) | (C) FY 2005 (preliminary) |
|----|---------------------------------|----------------------------|---------------------------------|---------------------------------|
| a. | Basic research | ,000 | \$,000 | \$,000 |
| b. | Applied research | ,000 | \$,000 | \$,000 |
| | Total | | | |
| | research | ,000 | \$,000 | ,000 |
| c. | Advanced technology development | \$\$,000 | \$,000 | \$,000 |
| d. | Major systems development | \$,000 | ,000 | \$,000 |
| | Total | | | |
| | development | ,000 | ,000 | ,000 |
| | Total research | | | |
| | and development | ,000 | \$\$,000 | ,000 |
| e. | R&D Plant | \$,000 | \$,000 | \$,000 |
| | Total | ,000 | ,000 | \$,000 |

3. What were your agency's FY 2003 *obligations* for 1) basic research and 2) applied research for each of the fields of science and engineering listed below? (*Report dollars in thousands; if none, enter "0."*)

Definitions for Question 3

Previously defined terms:

Obligations (See Question 2.)

Basic research (See Question 2.)

Applied research (See Question 2.)

Obligations for FY 2003 research activities at your agency (actual)

| Field of science a (See Attachment | and engineering 1 for classification of fields.) | Basic research FY 2003 | Applied research FY 2003 | Total research FY 2003 | |
|------------------------------------|--|---------------------------|-----------------------------|---------------------------|--|
| Life Sciences | Biological (excluding environmental) | \$,000 | \$,000 | ,000 | |
| | Environmental biology | ,000 | \$,000 | ,000 | |
| | Agricultural science | \$,000 | \$,000 | ,000 | |
| | Medical sciences | \$,000 | \$\$,000 | ,000 | |
| | Life science, not elsewhere classified | \$,000 | ,000 | ,000 | |
| Psychology | Biological aspects | ,000 | \$,000 | ,000 | |
| | Social aspects | ,000 | \$,000 | ,000 | |
| | Psychological sciences, not elsewhere classified | \$,000 | \$,,000 | ,000 | |
| Physical Sciences | Astronomy | \$,,000 | \$,,000 | ,000 | |
| | Chemistry | \$\$,000 | \$\$ | \$,000 | |
| | Physics | \$,000 | \$\$,000 | \$,000 | |
| | Physical sciences, not elsewhere classified | ,000 | ,000 | ,000 | |
| Environmental Sciences | Atmospheric sciences | \$,000 | \$,000 | \$,000 | |
| | Geological sciences | \$\$ | ,000 | \$,000 | |
| | Oceanography | \$\$ | \$\$ | ,000 | |
| | Environmental sciences, not elsewhere classified | \$\$,000 | \$,000 | \$,000 | |

Obligations for FY 2003 research activities at your agency (actual)

| Field of science and (See Attachment 1 | nd engineering for classification of fields.) | Basic research FY 2003 | Applied research FY 2003 | Total research FY 2003 | |
|--|---|---------------------------|-----------------------------|---------------------------|--|
| Mathematics and Computer | | | | | |
| Sciences | Mathematics | \$,000 | ,000 | ,000 | |
| | Computer sciences | ,000 | \$\$ | \$,,000 | |
| | Mathematics and | | | | |
| | computer sciences, not elsewhere classified | ,000 | \$,000 | ,000 | |
| Engineering | Aeronautical | \$\$,000 | \$,000 | \$,000 | |
| | Astronautical | ,000 | \$,000 | ,000 | |
| | Chemical | ,000 | \$,000 | ,000 | |
| | Civil | ,000 | \$,000 | ,000 | |
| | Electrical | ,000 | \$\$,000 | ,000 | |
| | Mechanical | ,000 | \$\$,000 | ,000 | |
| | Metallurgical and materials | \$,000 | ,000 | \$,000 | |
| | Engineering, not elsewhere classified | \$\$,000 | ,000 | \$,000 | |
| Social Sciences | Anthropology | ,000 | ,000 | ,000 | |
| | Economics | ,000 | \$,000 | ,000 | |
| | Political science | ,000 | \$,000 | ,000 | |
| | Sociology | ,000 | \$,000 | ,000 | |
| | Social sciences, not elsewhere classified | \$,000 | \$,000 | ,000 | |
| Other Sciences, no | t elsewhere classified | \$\$ | \$,000 | \$,,000 | |
| | Total for all fields | ,000 | \$,000 | \$,000 | |

NOTE: The totals for all fields for 1) basic research, and 2) applied research, should match the amounts reported for Question 2 in Rows a and b, Column A.

4. What were your agency's FY 2004 *obligations* for 1) basic research and 2) applied research for each of the fields of science listed below? (*Report dollars in thousands; if none, enter "0."*)

Definitions for Question 4

Previously defined terms:

Obligations (See Question 2.)

Basic research (See Question 2.)

Applied research (See Question 2.)

Obligations for FY 2004 research activities at your agency (preliminary estimates)

| Field of science and engineering (See Attachment 1 for classification of fields.) | Basic research FY 2004 | Applied research FY 2004 | Total research FY 2004 |
|--|---------------------------|-----------------------------|---------------------------|
| Life sciences | ,000 | ,000 | ,000 |
| Psychology | \$,000 | ,000 | ,000 |
| Physical sciences | \$,000 | ,000 | ,000 |
| Environmental sciences | \$,000 | ,000 | ,000 |
| Mathematics and computer sciences | \$,000 | ,000 | ,000 |
| Engineering | \$,000 | ,000 | ,000 |
| Social sciences | \$,000 | ,000 | ,000 |
| Other sciences, not elsewhere classified | \$,000 | \$,000 | \$,000 |
| Total | ,000 | ,000 | \$,000 |

NOTE: The totals for all fields for 1) basic research, and 2) applied research, should match the amounts reported for Question 2 in Rows a and b, Column B.

5. What were your agency's FY 2005 *obligations* for 1) basic research and 2) applied research for each of the fields of science and engineering listed below? (*Report dollars in thousands; if none, enter "0."*)

Definitions for Question 5

Previously defined terms:

Obligations (See Question 2.)

Basic research (See Question 2.)

Applied research (See Question 2.)

Obligations for FY 2005 research activities at your agency (preliminary estimates)

| Field of science and engineering (See Attachment 1 for classification of fields.) | Basic research FY 2005 | Applied research FY 2005 | Total research FY 2005 |
|--|---------------------------|-----------------------------|---------------------------|
| Life sciences | ,000 | ,000 | ,000 |
| Psychology | ,000 | \$\$ | ,000 |
| Physical sciences | ,000 | \$\$ | ,000 |
| Environmental sciences | ,000 | \$\$ | ,000 |
| Mathematics and computer sciences | ,000 | \$\$ | ,000 |
| Engineering | ,000 | \$\$ | ,000 |
| Social sciences | ,000 | \$\$ | ,000 |
| Other sciences, not elsewhere classified | ,000 | \$\$ | ,000 |
| Total | \$,000 | ,000 | ,000 |

NOTE: The totals for all fields for 1) basic research, and 2) applied research, should match the amounts reported for Question 2 in Rows a and b, Column C.

Definitions for Question 6

New definitions:

A *performer* is either an intramural group or organization carrying out an operational function or an extramural organization or person receiving support or providing services under a contract or grant.

Federal intramural performers are the agencies of the Federal Government. Their work is carried on directly by agency personnel. Obligations reported under this category are for activities performed or to be performed by the reporting agency itself, or represent funds that the agency transfers to another Federal agency for performance of work as long as the ultimate performer is that agency or any Federal agency. If the ultimate performer is not a Federal agency, the funds so transferred are reported by the transferring agency under the appropriate extramural performer category (universities and colleges, other nonprofit institutions, or industrial firms).

NOTE: Intramural activities cover not only the actual intramural R&D performance, but also the costs associated with the planning and administration of both intramural and extramural programs by Federal personnel. Intramural activities also include the costs of supplies and equipment, essentially of an "off-the-shelf" nature, that are procured for use in intramural R&D. For example, the purchase from an extramural source of an operational launch vehicle (i.e., one that has gone beyond the development or prototype stage) that is used for intramural performance of R&D is reported as a part of the cost of intramural R&D.

Industrial firms are organizations that may legally distribute net earnings to individuals or other organizations.

Universities and colleges are institutions engaged primarily in providing resident and/or accredited instruction for at least a 2-year program above the secondary school level. Included are colleges of liberal arts; schools of arts and sciences; professional schools, as in engineering and medicine, including affiliated hospitals and associated research institutes; and agricultural experiment stations.

State and local governments include State and local government agencies, excluding State or local universities and colleges, agricultural experiment stations, medical schools, and affiliated hospitals. (Federal R&D funds obligated directly to such State and local institutions excluded in this category are included under the "Universities and colleges" category in this survey.) R&D activities under the State and local category are performed either by the State or local agencies themselves or by other organizations under grants or contracts from such agencies. Regardless of the ultimate performer, Federal R&D funds directed to State and local governments are reported under this sector and no other.

Nonprofit institutions - Nonprofit institutions are private organizations, other than educational institutions, whose net earnings in no part inure to the benefit of a private stockholder or individual, and other private organizations organized for the exclusive purpose of turning over their entire net earnings to such nonprofit organizations.

(continued)

Definitions for Question 6 *(continued)*

Federally funded research and development centers (FFRDCs) are R&D-performing organizations that are exclusively or substantially financed by the Federal Government and are supported by the Federal Government either to meet a particular R&D objective or, in some instances, to provide major facilities at universities for research and associated training purposes. Each center is administered either by an industrial firm, a university or college, or another nonprofit institution. See Question 9 for listings of FFRDCs by category.

In general, all of the following criteria are met by an organization that is included in the FFRDC category:

- 1) Its primary activities include one or more of the following: basic research, applied research, development, or management of research and development (specifically excluded are organizations engaged primarily in routine quality control and testing, routine service activities, production, mapping and surveys, and information dissemination)
- 2) It is a separate operational unit within the parent organization or is organized as a separately incorporated organization.
- 3) It performs actual research and development or R&D management, either upon direct request of the Federal Government or under a broad charter from the Federal Government, but in either case under the direct monitorship of the Federal Government.
- 4) It receives its major financial support (70 percent or more) from the Federal Government, usually from one agency.
- 5) It has, or is expected to have, a long-term relationship with its sponsoring agency (about 5 years or more), as evidenced by specific obligations assumed by it and the agency.
- 6) Most or all of its facilities are owned by, or are funded under contract with, the Federal Government, and
- 7) It has an average annual budget (operating and capital equipment) of at least \$500,000.

Foreign performers include foreign citizens, foreign organizations, foreign universities and colleges, and foreign governments, as well as international organizations (such as the North Atlantic Treaty Organization (NATO), United Nations Educational, Scientific, and Cultural Organization (UNESCO), and World Health Organization (WHO)) performing R&D work abroad financed by the your agency. Please *exclude* the following:

- --U.S. agencies, U.S. organizations, and U.S. citizens performing R&D abroad for your agency,
- --foreign scientists performing in the United States
- -- "offshore" payments

Please note that as of FY 1996, the definition of foreign performer for this survey no longer includes U.S. citizens performing R&D abroad under special foreign currency funds.

Previously defined terms:

Obligations (See Question 2.) Development (See Question 2.)

Basic research (See Question 2.) Advanced technology development (See Question 2.)

Applied research (See Question 2.) Major systems development (See Question 2.)

6. What were your agency's FY 2003 *obligations* for 1) basic research, 2) applied research, and 3) development for each of the types of research performers listed below? (*Report dollars in thousands; if none, enter "0."*)

Note: Even if all work is performed extramurally, costs associated with the planning and administration of such programs by Federal personnel must be reported under Federal intramural costs.

Definitions for Question 6 See pages 9-10.

Obligations for FY 2003 research and development activities at your agency (actual)

| Type of research and development performer a. Federal intramural | (A) Basic research FY 2003 | (B) Applied research FY 2003 | (C) Advanced technology development FY 2003 | (D) Major systems development FY 2003 | (E) Total research and development FY 2003 |
|--|----------------------------|------------------------------|---|--|--|
| (agencies of the Federal government) | \$,000 | \$\$,000 | \$\$,000 | ,000 | \$,000 |
| Portion of Federal intramural for personnel costs | \$,000 | \$\$ | \$,000 | \$\$ | \$ |
| b. Industrial firms (excluding federally funded research and development centers— FRDCs) | \$,000 | \$,000 | \$,000 | \$,000 | \$,000 |
| c. FFRDCs administered by industrial firms (See Question 9, Section A.) | \$,000 | \$\$ | \$,000 | \$\$ | \$,000 |
| d. Universities and colleges (excluding FFRDCs) | \$,000 | \$,000 | \$,000 | \$,000 | \$,000 |
| e. FFRDCs administered by universities and colleges (See Question 9, Section B.) | \$,000 | \$,000 | \$\$,000 | \$,000 | \$,000 |
| f. Nonprofit institutions (excluding FFRDCs) | \$,000 | ,000 | \$,000 | ,000 | ,000 |
| g. FFRDCs administered by nonprofit institutions (See Question 9, Section C.) | \$,000 | \$,000 | \$,000 | \$,000 | \$,000 |
| h. State and local governments | \$,000 | ,000 | \$,000 | ,000 | ,000 |

Obligations for FY 2003 research and development activities at your agency (actual)

| | (A) | (B) | (C) Advanced | (D) | (E) Total research |
|--|---------------------------|--------------------------|--------------------------------------|---|-------------------------------|
| Type of research and development performer | Basic research FY 2003 | Applied research FY 2003 | technology development FY 2003 | Major systems development FY 2003 | and development FY 2003 |
| All domestic performers | \$,000 | \$,000 | ,000 | \$,000 | \$,000 |
| i. Foreign | \$,000 | ,000 | \$,000 | \$,000 | ,000 |
| Total all performers | \$,000 | \$,000 | \$,000 | \$,000 | \$,000 |

NOTE: Totals for all performers in Columns A, B, C, and D should equal amounts reported for Question 2, Rows a, b, c, and d for Column A.

7. What is your best estimate of your agency's FY 2004 *obligations* for 1) basic research, 2) applied research, and 3) development for each of the types of research performers listed below? (*Report dollars in thousands; if none, enter "0."*)

Note: Even if all work is performed extramurally, costs associated with the planning and administration of such programs by Federal personnel must be reported under Federal intramural costs.

Definitions for Question 7

Previously defined terms:

Obligations (See Question 2.)

Basic research (See Question 2.)

Applied research (See Question 2.)

Development (See Question 2.)

Performer (See Question 6.)

Federal intramural (See Question 6.)

Industrial firms (See Question 6.)

State and local governments (See Question 6.)

Nonprofit institutions (See Question 6.)

Federally funded research and development centers (FFRDCs) (See Question 6 for definitions.

See Question 9 for a list of FFRDCs.)

Obligations for FY 2004 research and development activities at your agency (preliminary estimates)

| | Type of research and | (A) Basic research | (B) Applied research | (C) Advanced technology development | (D) Major systems development | (E) Total research and development |
|----|---|--------------------|----------------------|-------------------------------------|-------------------------------------|---|
| я | development performer Federal intramural | FY 2004 | FY 2004 | FY 2004 | FY 2004 | FY 2004 |
| u. | (agencies of the Federal government) | \$,000 | ,000 | ,000 | \$,000 | \$,000 |
| | Portion of Federal intramural for personnel costs | \$,000 | \$,000 | \$,000 | \$,000 | \$,000 |
| b. | Industrial firms (excluding federally funded research and development centers— FRDCs) | \$,000 | \$,000 | \$,000 | \$\$ | \$,000 |
| c. | FFRDCs administered by industrial firms | | | | | |
| | (See Question 9, Section A.) | \$,000 | \$\$,000 | \$\$,000 | \$,000 | ,000 |
| d. | Universities and colleges (excluding FFRDCs) | \$,000 | \$,000 | \$,000 | \$,000 | \$,000 |
| e. | FFRDCs administered by universities and colleges | | | | | |
| | (See Question 9, Section B.) | \$\$,000 | \$,000 | ,000 | \$,000 | ,000 |
| f. | Nonprofit institutions (excluding FFRDCs) | \$,000 | \$,000 | ,000 | \$,,000 | ,000 |

Obligations for FY 2004 research and development activities at your agency (preliminary estimates)

| g. | Type of research and development performer FFRDCs administered by nonprofit institutions | (A) Basic research FY 2004 | (B) Applied research FY 2004 | (C) Advanced technology development FY 2004 | (D) Major systems development FY 2004 | (E) Total research and development FY 2004 |
|----|--|----------------------------|------------------------------|---|--|--|
| | (See Question 9, Section C.) | \$,000 | \$,000 | \$,000 | ,000 | ,000 |
| h. | State and local governments | \$,000 | \$\$,000 | \$,000 | \$,000 | ,000 |
| i. | All domestic performers Foreign | \$,000 \$,000 | \$,000 \$,000 | \$,000 | \$,000 | \$,000 |
| | Total all performers | \$,000 | \$,000 | \$,000 | \$,000 | \$,000 |

NOTE: Totals for all performers in Columns A, B, C, and D should equal amounts reported for Question 2, Rows a, b, c, and d for Column B.

8. What is your best estimate of your agency's FY 2005 *obligations* for 1) basic research, 2) applied research, and 3) development for each of the types of research performers listed below? (*Report dollars in thousands; if none, enter "0."*)

Note: Even if all work is performed extramurally, costs associated with the planning and administration of such programs by Federal personnel must be reported under Federal intramural costs.

| Definitions for Question 8 | | | | |
|--------------------------------------|---|--|--|--|
| Previously defined terms: | | | | |
| Obligations (See Question 2.) | Industrial firms (See Question 6.) | | | |
| Basic research (See Question 2.) | Universities and colleges (See Question 6.) | | | |
| Applied research (See Question 2.) | Nonprofit institutions (See Question 6.) | | | |
| Development (See Question 2.) | State and local governments (See Question 6.) | | | |
| Performer (See Question 6.) | FFRDCs (See Question 6. Also, see Question | | | |
| Federal intramural (See Question 6.) | 9 for a list of FFRDCs.) | | | |

Obligations for FY 2005 research and development activities at your agency (preliminary estimates)

| | Type of research and development performer | (A) Basic research FY 2005 | (B) Applied research FY 2005 | (C) Advanced technology development FY 2005 | (D) Major systems development FY 2005 | (E) Total research and development FY 2005 |
|----|---|----------------------------|------------------------------|---|--|--|
| a. | Federal intramural (agencies of the Federal government) | \$,000 | \$\$,000 | \$,000 | \$,000 | \$,000 |
| | Portion of Federal intramural for personnel costs | \$,000 | \$,000 | \$,000 | \$,000 | \$,000 |
| b. | Industrial firms (excluding federally funded research and development centers— FRDCs) | \$,000 | \$,000 | \$,000 | \$\$,000 | \$ |
| c. | FFRDCs administered by industrial firms (See Question 9, Section A.) | \$,000 | \$,000 | \$,000 | \$,000 | \$,000 |
| d. | Universities and colleges (excluding FFRDCs) | \$,000 | \$,000 | \$,000 | \$,000 | \$,000 |
| e. | FFRDCs administered by universities and colleges | | | | | |
| | (See Question 9, Section B.) | \$,000 | \$,000 | ,000 | \$,000 | ,000 |

Obligations for FY 2005 research and development activities at your agency (preliminary estimates)

| | | (A) | (B) | (C) Advanced | (D) | (E) Total research and development FY 2005 | |
|----|---|---------------------------|--------------------------|--------------------------------------|---|--|--|
| f. | Type of research and development performer Nonprofit institutions | Basic research FY 2005 | Applied research FY 2005 | technology development FY 2005 | Major systems development FY 2005 | | |
| | (excluding FFRDCs) | \$,000 | \$\$,000 | \$\$,000 | \$\$,000 | ,000 | |
| g. | FFRDCs administered by nonprofit institutions | | | | | | |
| | (See Question 9, Section C.) | \$,000 | ,000, | \$,000 | ,000 | ,000 | |
| h. | State and local governments | \$,000 | \$,000 | \$\$ | \$,000 | ,000 | |
| | All domestic performers | \$,,000 | \$,000 | ,000 | \$,000 | \$,000 | |
| i. | Foreign | \$,000 | ,000 | \$,000 | ,000 | ,000 | |
| | Total all performers | \$,,000 | \$,000 | ,000 | \$,000 | \$,000 | |

NOTE: Totals for all performers in Columns A, B, C, and D should equal amounts reported for Question 2, Rows a, b, c, and d for Column C.

9. What were your agency's FY 2003 *obligations* for 1) research and development, and 2) R&D plant for each of the federally funded research and development centers (FFRDCs) listed below? (*Report dollars in thousands; if none, enter "0."*)

Please report your agency's obligations for each FFRDC even if another agency sponsors that FFRDC.

Definitions for Question 9

Previously defined terms:

Obligations (See Question 2.)

Research and development (See Question 1.)

R&D plant (See Question 1.)

FFRDC (See Question 6.)

Obligations for FY 2003 research activities at your agency

| Name of FFRDC Section A: Administered by industrial firms | (A) Research and development FY 2003 | (B) R&D plant FY 2003 |
|--|--------------------------------------|------------------------|
| Idaho National Engineering & Environmental Laboratory (Bechtel BSX Technologies Idaho, LLC), Idaho Falls, ID | \$,000 | \$,000 |
| Science and Technology Policy Institute, The (RAND Corporation), Washington, DC | \$,000 | \$,000 |
| Sandia National Laboratories (Scandia Corporation which is a subsidiary of Lockheed Martin Corp.), Albuquerque, NM | \$,,000 | \$\$ |
| Savannah River Technology Center (Westinghouse Savannah River Co.), Aiken, SC | \$,,000 | \$,000 |
| All industrial-administered FFRDCs | ,000 | ,000 |

NOTE: The Section A subtotal for Column A should equal the amount reported for Question 6 in Row c, Column E. The Column B subtotal should equal the amount reported for Question 11, Row c, Column A.

| Section B: Administered by universities and colleges (including university consortia) | \$,000 | \$\$,000 |
|---|--------|----------|
| Ames Laboratory (Iowa State University of Science and Technology) Ames, IA | \$,000 | \$\$,000 |
| Argonne National Laboratory (University of Chicago), Argonne, IL | \$,000 | \$\$ |
| Ernest Orlando Lawrence Berkeley National Laboratory (University of California), Berkeley, CA | \$,000 | \$\$,000 |
| Fermi National Accelerator Laboratory (Universities Research Association, Inc.), Batavia, IL | \$,000 | \$\$,000 |
| Jet Propulsion Laboratory (California Institute of Technology), Pasadena, CA | ,000 | \$,000 |

Obligations for FY 2003 research activities at your agency

| | (A) Research and | (B) |
|---|------------------------|----------------------|
| Name of FFRDC | development FY 2003 | R&D plant FY 2003 |
| Lawrence Livermore National Laboratory (University of California), Livermore, CA | \$\$ | ,000, |
| Lincoln Laboratory (Massachusetts Institute of Technology), Lexington, MA Los Alamos National Laboratory (University of California), Los Alamos, NM | \$,00 | 000 \$,000 |
| Los Alamos National Laboratory (University of California), Los Alamos, NM | \$\$,00 | ,000 \$, |
| National Astronomy & Ionosphere Center (Cornell University), Arecibo, PR | \$\$,00 | ,000 \$, |
| National Center for Atmospheric Research (University Corporation for Atmospheric Research), Boulder, CO | \$\$,00 | ,000 \$, |
| National Optical Astronomy Observatories (Association of Universities for Research in Astronomy, Inc.), Tucson, AZ | \$\$ | ,000, |
| National Radio Astronomy Observatory (Associated Universities, Inc.), Green Bank, WV | \$\$ | ,000, |
| Oak Ridge Institute for Science & Education (Oak Ridge Associated Universities, Inc.), Oak Ridge, TN | \$\$ | ,000, |
| Princeton Plasma Physics Laboratory (Princeton University), Princeton, NJ | \$\$ | ,000, |
| Software Engineering Institute (Carnegie Mellon University), Pittsburgh, PA | \$\$ | ,000, |
| Stanford Linear Accelerator Center (Leland Stanford, Jr. University), Stanford, CA | \$,,00 | ,000, |
| Thomas Jefferson National Accelerator Facility (Southwestern Universities Research Association, Inc.), Newport News, VA | \$,00 | ,000, |
| Total university and college-administered FFRDCs | \$,00 | ,000 \$, |
| NOTE: The Section B subtotal for Column A should Row e, Column E. The Section B subtotal for Colum Question 11, Row e, Column A. | | |
| Section C: Administered by nonprofit institutions (other than universities and colleges) | \$,00 | ,000, |
| Aerospace Federally funded Research & Development Center (The Aerospace Corp.) El Segundo, CA | \$\$ | ,000 \$, |
| Arroyo Center (RAND Corporation), Santa Monica, CA | \$,00 | ,000, |
| Brookhaven National Laboratory (Brookhaven Science Associates, Inc.), Upton, Long Island, NY | \$,00 | ,000 ,000 |

Obligations for FY 2003 research activities at your agency

| | Resea | A) rch and | (B) | | |
|---|-------|----------------|------------|-------------------|--|
| Name of FFRDC | | opment 2003 | | D plant Y 2003 | |
| C3I Federally Funded Research & Development Center (MITRE Corp.): Bedford, MA Laboratory | \$ | ,000 | \$ | ,000 | |
| C3I Federally Funded Research & Development Center (MITRE Corp.): McLean, VA Laboratory | \$ | ,000 | \$ | ,000 | |
| Center for Advanced Aviation System Development (MITRE Corp.), McLean, VA | \$ | ,000 | \$ | ,000 | |
| Center for Naval Analyses (The CNA Corporation), Alexandria, VA | \$ | ,000 | \$ | ,000 | |
| Center for Nuclear Waste Regulatory Analyses (Southwest Research Institute), San Antonio, TX | \$ | ,000 | \$ | ,000 | |
| Inst for Defense Analyses Communications & Computing FFRDC (Institute for Defense Analyses), Alexandria, VA | \$ | ,000 | \$ | ,000 | |
| Institute for Defense Analyses Studies & Analyses FFRDC (Institute for Defense Analyses), Alexandria, VA | \$ | ,000 | \$ | ,000 | |
| Internal Revenue Service (IRS) FFRDC (MITRE Corp.), Lanham, MD | \$ | ,000 | \$ | ,000 | |
| National Defense Research Institute (RAND Corporation), Santa Monica, CA | \$ | ,000 | \$ | ,000 | |
| National Renewable Energy Laboratory (Midwest Research Institute), Golden, CO | \$ | ,000 | \$ | ,000 | |
| Oak Ridge National Laboratory (UT-Battelle, LLC), Oak Ridge, TN | \$ | ,000 | \$ | ,000 | |
| Pacific Northwest National Laboratory (Battelle Memorial Institute), Richland, WA | \$ | ,000 | \$ | ,000 | |
| Project Air Force (RAND Corporation), Santa Monica, CA | \$ | ,000 | \$ | ,000 | |
| Science and Technology Policy Institute, The (RAND Corporation), Washington, DC | \$ | ,000 | \$ | ,000 | |
| Total nonprofit-administered FFRDCs | \$ | ,000 | \$ | ,000 | |

NOTE: The Section C subtotal for Column A should equal the amount reported for Question 6 in Row g, Column E. The Section C subtotal for Column B should equal the amount reported for Question 11, Row g, Column A.

10. For each country in which your agency had foreign performers, what were your agency's FY 2003 *obligations* for 1) basic research, and 2) all research and development? (*Report dollars in thousands; if none, enter "0."*)

Definitions for Question 10

Previously defined terms:

Foreign performers include foreign citizens, foreign organizations, foreign universities and colleges, and foreign governments, as well as international organizations (such as the North Atlantic Treaty Organization (NATO), United Nations Educational, Scientific, and Cultural Organization (UNESCO), and World Health Organization (WHO)) performing R&D work abroad financed by the your agency. Please **exclude** the following:

- --U.S. agencies, U.S. organizations, and U.S. citizens performing R&D abroad for your agency,
- --foreign scientists performing in the United States
- -- "offshore" payments

Please note that as of FY 1996, the definition of foreign performer for this survey no longer includes U.S. citizens performing R&D abroad under special foreign currency funds.

Obligations (See Question 2.)

Basic research (See Question 2.)

Research and development (See Question 1.)

| | gn performer Write names of | Basic research | (B) Total research and development (including basic research) |
|----------------|------------------------------|----------------|---|
| Continent/Area | countries below: | FY 2003 | FY 2003 |
| Africa | | \$,000 | ,000 |
| . <u></u> | | \$\$,000 | ,000 |
| Asia | | \$\$,000 | \$\$ |
| | | \$,000 | \$\$,000 |
| Europe | | \$,000 | \$,000 |
| | | \$,000 | \$,000 |
| | | \$,000 | \$,000 |
| | | \$,000 | \$,000 |
| North America | | \$,000 | \$,000 |
| | | \$,000 | \$,000 |

| Foreig | gn performer Write names of countries below: | (A) Basic research FY 2003 | (B) Total research and development (including basic research) FY 2003 | | |
|--------------------------------|---|-----------------------------|---|--|--|
| | | \$\$ | \$\$,000 | | |
| | | ,000 | \$,000 | | |
| South America | | \$\$ | \$,000 | | |
| | | \$\$ | \$,000 | | |
| | | \$,000 | ,000 | | |
| Oceania (Pacific Islands, | | | | | |
| Australia, etc.) | | \$\$ | \$,000 | | |
| | | ,000 | \$,000 | | |
| | | \$\$ | ,000 | | |
| Other, including international | | | | | |
| organizations | | ,000 | \$,000 | | |
| | Total for all areas and organizations | ,000 | \$,000 | | |

NOTE: The total for all areas and organizations in Column A should equal the amount reported for Question 6 in Row i, Column A. The total for all areas and organizations in Column B should equal the total amount for Question 6 in Row i, Column E.

11. What were your agency's *obligations* for R&D plant for the types of performers listed below for 1) FY 2003, 2) FY 2004, and FY 2005? (*Report dollars in thousands; if none, enter "0."*)

Please report actual obligations for FY 2003. For FY 2004 and 2005, please provide your best estimate of what these obligations will be.

| Definitions for Question 11 | | | | | |
|---|---|--|--|--|--|
| Previously defined terms: | | | | | |
| Obligations (See Question 2.) | Universities and colleges (See Question 6.) | | | | |
| R&D plant (See Question 1.) | Nonprofit institutions (See Question 6.) | | | | |
| Performer (See Question 6.) | State and local governments (See Question 6.) | | | | |
| Federal intramural (See Question 6.) | FFRDCs (See Question 6.) | | | | |
| <i>Industrial firms</i> (See Question 6.) | Foreign (See Question 6.) | | | | |

Obligations by your agency for R&D plant

| | Type of research performer | (A) R&D plant FY 2003 (actual) | (B) R&D plant FY 2004 (preliminary) | (C) R&D plant FY 2005 (preliminary) | |
|----|--|---|--|--|--|
| a. | Federal intramural (agencies of the Federal government) | \$,000 | \$,000 | \$,000 | |
| | Portion of Federal intramural for personnel costs | \$,000 | \$,000 | \$,000 | |
| b. | Industrial firms (excluding FFRDCs) | ,000 | \$\$ | ,000 | |
| c. | FFRDCs administered by industrial firms | \$,000 | ,000 | \$\$ | |
| d. | Universities and colleges (excluding FFRDCs) | \$,000 | \$,000 | \$\$ | |
| e. | FFRDCs administered by universities and colleges | \$,000 | \$,000 | \$,000 | |
| f. | Nonprofit institutions (excluding FFRDCs) | \$,000 | \$,000 | \$,000 | |
| g. | FFRDCs administered by nonprofit institutions | \$,000 | \$,000 | \$,000 | |
| h. | State and local governments | ,000 | \$\$ | ,000 | |
| | All domestic performers | ,000 | ,000 | ,000 | |
| i. | Foreign | ,000 | \$\$ | ,000 | |
| | Total all performers NOTE: These amounts should equal R&D plant amounts for question 2.) | ,000 | ,000 | \$,000 | |

NOTE: Amounts reported in Column A for Rows c, e, and g should equal the amounts reported for Question 9, Column B subtotals for Sections A, B, and C.

Note: If the amount you reported above for row e differs from the amount reported to us for the Federal Science and Engineering Support Survey for FY 2003, please explain below.

Part A1

12. What were your agency's FY 2003 *obligations* for research (basic and applied) for each state and for each of the 8 types of performers listed below? (*Report dollars in thousands; if none, enter "0."*)

Definitions for Question 12

Previously defined terms:

Obligations (See Question 2.) Industrial firms (See Question 6.)

Research (See Question 2.) Universities and colleges (See Question 6.)

Development (See Question 2.) Nonprofit institutions (See Question 6.)

Performer (See Question 6.) State and local governments (See Question 6.)

Federal intramural (See Question 6.) FFRDCs (See Question 6.)

Obligations for research (basic and applied) for FY 2003

| | (A) | | (B) | | (C) FFRDCs | | (D) Universities and | |
|-------------|--------------------|-------|-------------------------------------|-------|----------------------------------|------|-----------------------------|------|
| State | Federal intramural | | Industrial firms (excluding FFRDCs) | | administered by industrial firms | | colleges (excluding FFRDCs) | |
| Alabama | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Alaska | \$ | ,000 | \$ | ,000, | \$ | ,000 | \$ | ,000 |
| Arizona | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Arkansas | \$ | ,000 | \$ | ,000, | \$ | ,000 | \$ | ,000 |
| California | \$ | ,000 | \$ | ,000, | \$ | ,000 | \$ | ,000 |
| Colorado | \$ | ,000 | \$ | ,000, | \$ | ,000 | \$ | ,000 |
| Connecticut | \$ | ,000 | \$ | ,000, | \$ | ,000 | \$ | ,000 |
| Delaware | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Florida | \$ | ,000, | \$ | ,000, | \$ | ,000 | \$ | ,000 |
| Georgia | \$ | ,000 | \$ | ,000, | \$ | ,000 | \$ | ,000 |
| Hawaii | \$ | ,000 | \$ | ,000, | \$ | ,000 | \$ | ,000 |
| Idaho | \$ | ,000 | \$ | ,000, | \$ | ,000 | \$ | ,000 |
| Illinois | \$ | ,000 | \$ | ,000, | \$ | ,000 | \$ | ,000 |
| Indiana | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Iowa | \$ | ,000 | \$ | ,000, | \$ | ,000 | \$ | ,000 |
| Kansas | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |

Obligations for research (basic and applied) for FY 2003

| | (A) | | (B) | | (C) FFRDCs | | (D) Universities and | |
|-------------------|------------------|---------------------|---|--------|-----------------|------|-------------------------|--------|
| a | 7 . 1. 1 | | Industrial firms | | administered by | | colleges (excluding | |
| State Kentucky | Federal intramus | ral (exc 000 \$_ | cluding FFRI | 000 \$ | industrial fir | ,000 | FFRDCs | ,000 |
| · | | | , | | | | | |
| Louisiana | \$,0 | 000 \$_ | ,, | 000 \$ | | ,000 | \$ | _ ,000 |
| Maine | \$,0 | 000 \$_ | , | 000 \$ | | ,000 | \$ | ,000 |
| Maryland | \$,0 | 000 \$_ | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | 000 \$ | | ,000 | \$ | ,000 |
| Massachusetts | \$,0 | 000 \$_ | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | 000 \$ | | ,000 | \$ | ,000 |
| Michigan | \$,0 | 000 \$_ | ,,, | 000 \$ | | ,000 | \$ | ,000 |
| Minnesota | \$,0 | 000 \$_ | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | \$ 000 | | ,000 | \$ | ,000 |
| Mississippi | \$,0 | 000 \$_ | , | 000 \$ | | ,000 | \$ | ,000 |
| Missouri | \$,0 | 000 \$_ | ,(| 000 \$ | | ,000 | \$ | ,000 |
| Montana | \$,0 | 000 \$_ | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | \$ 000 | | ,000 | \$ | ,000 |
| Nebraska | \$,0 | 000 \$_ | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | \$ 000 | | ,000 | \$ | ,000 |
| Nevada | \$,0 | 000 \$_ | ,, | 000 \$ | | ,000 | \$ | ,000 |
| New Hampshire | \$,0 | 000 \$_ | , | 000 \$ | | ,000 | \$ | ,000 |
| New Jersey | \$,0 | 000 \$_ | , | 000 \$ | | ,000 | \$ | ,000 |
| New York | \$,0 | 000 \$_ | , | 000 \$ | | ,000 | \$ | ,000 |
| North Carolina | \$,0 | 000 \$_ | , | 000 \$ | | ,000 | \$ | ,000 |
| North Dakota | \$,0 | 000 \$_ | ,, | 000 \$ | | ,000 | \$ | ,000 |
| Ohio | \$,0 | 000 \$_ | ,(| 000 \$ | | ,000 | \$ | ,000 |
| Oklahoma | \$,0 | 000 \$_ | ,, | 000 \$ | | ,000 | \$ | ,000 |
| Oregon | \$,0 | 000 \$_ | ,, | 000 \$ | | ,000 | \$ | ,000 |
| Pennsylvania | \$,0 | 000 \$_ | , | 000 \$ | | ,000 | \$ | ,000 |
| Rhode Island | \$,0 | 000 \$_ | , | 000 \$ | | ,000 | \$ | ,000 |
| South Carolina | \$,0 | 000 \$_ | ,,, | 000 \$ | | ,000 | \$ | ,000 |
| South Dakota | \$,0 | 000 \$_ | ,,, | 000 \$ | | ,000 | \$ | ,000 |
| Tennessee | \$,0 | 000 \$_ | ,,, | 000 \$ | | ,000 | \$ | ,000 |

Obligations for research (basic and applied) for FY 2003

| | (A) | (B) | (C) FFRDCs | (D) Universities and |
|----------------------------------|--------------------|-------------------------------------|----------------------------------|-----------------------------|
| State | Federal intramural | Industrial firms (excluding FFRDCs) | administered by industrial firms | colleges (excluding FFRDCs) |
| Texas | \$\$,000 | \$,000 | \$,000 | ,000 |
| Utah | \$,000 | \$\$ | \$\$ | \$,000 |
| Vermont | ,000 | \$\$ | ,000 | ,000 |
| Virginia | ,000 | \$,000 | \$,000 | ,000 |
| Washington | \$\$,000 | \$\$ | \$\$ | \$,000 |
| West Virginia | ,000 | \$\$ | \$\$ | ,000 |
| Wisconsin | \$\$ | \$\$ | ,000 | ,000 |
| Wyoming | \$\$ | \$\$ | ,000 | ,000 |
| District of | | | | |
| Columbia | \$,000 | \$,000 | \$,000 | \$\$,000 |
| Puerto Rico | \$\$ | ,000 | \$,000 | \$\$,000 |
| Other outlying areas (other U.S. | | | | |
| territories and possessions) | ,000 | \$\$ | ,000 | \$,000 |
| Offices abroad (administered by | | | | |
| the U.S. government) | ,000 | \$\$ | \$,000 | \$,000 |
| Total | ,000 | ,000 | ,000 | ,000 |

(Columns E through H continued below.)

(Part A1 continued)

Obligations for research (basic and applied) for FY 2003

| | (E) FFRDCs | (F) | (G) | (H) |
|---------------|---------------------------|---------------------------------|--|-----------------------------|
| | administered by | Nonprofit | FFRDCs | |
| State | universities and colleges | institutions (excluding FFRDCs) | administered by nonprofit institutions | State and local governments |
| Alabama | \$,000 | \$,000 | \$,000 | \$\$ |
| Alaska | \$,000 | \$,000 | \$,000 | \$,000 |
| Arizona | \$,000 | \$,000 | \$,000 | \$,000 |
| Arkansas | \$,000 | \$,000 | \$,000 | \$\$,000 |
| California | \$,000 | \$,000 | \$,000 | \$,000 |
| Colorado | \$,000 | \$,000 | \$,000 | ,000 |
| Connecticut | ,000 | \$,000 | \$,000 | \$,000 |
| Delaware | ,000 | \$,000 | \$,000 | \$,000 |
| Florida | ,000 | \$,000 | \$,000 | \$,000 |
| Georgia | ,000 | \$,000 | \$,000 | \$,000 |
| Hawaii | ,000 | \$,000 | \$,000 | \$,000 |
| Idaho | ,000 | \$,000 | \$,000 | \$,000 |
| Illinois | ,000 | \$,000 | \$,000 | \$,000 |
| Indiana | \$,000 | \$,000 | \$\$ | \$,000 |
| Iowa | \$,000 | \$,000 | \$,000 | \$,000 |
| Kansas | \$,000 | \$,000 | \$,000 | \$,000 |
| Kentucky | \$,000 | \$,000 | \$,000 | \$,000 |
| Louisiana | \$,000 | \$,,000 | \$\$ | ,000 |
| Maine | \$,,000 | \$,,000 | \$\$ | ,000 |
| Maryland | \$,000 | \$\$,000 | \$\$ | ,000 |
| Massachusetts | \$,000 | \$\$,000 | \$\$ | ,000 |
| Michigan | \$,000 | \$,000 | \$,000 | \$,000 |

Obligations for research (basic and applied) for FY 2003

| | (E _j | | (F) | | (G) | | (H) | |
|----------------|------------------------|---------|-------------------------|------|----------------------|---------|-----------|---------|
| State | administe universit | ered by | Nonprofi institution | | FFRDC administere | | State and | l local |
| State | colle | | (excluding FF) | | nonprofit insti | | governn | |
| Minnesota | \$ | ,000 | \$ | ,000 | \$ | _,000 | \$ | .000 |
| Mississippi | \$ | ,000 | \$ | ,000 | \$ | _ ,000 | \$ | ,000 |
| Missouri | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Montana | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Nebraska | \$ | ,000 | \$ | ,000 | \$ | _ ,000, | \$ | ,000 |
| Nevada | \$ | ,000 | \$ | ,000 | \$ | _ ,000, | \$ | ,000 |
| New Hampshire | \$ | ,000 | \$ | ,000 | \$ | _,000 | \$ | ,000 |
| New Jersey | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| New York | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| North Carolina | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| North Dakota | \$ | ,000 | \$ | ,000 | \$ | _,000 | \$ | ,000 |
| Ohio | \$ | ,000 | \$ | ,000 | \$ | _,000 | \$ | ,000 |
| Oklahoma | \$ | ,000 | \$ | ,000 | \$ | _,000 | \$ | ,000 |
| Oregon | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Pennsylvania | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Rhode Island | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| South Carolina | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| South Dakota | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Tennessee | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Texas | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Utah | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Vermont | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Virginia | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Washington | \$ | ,000 | \$ | ,000 | \$ | _,000 | \$ | ,000 |

Obligations for research (basic and applied) for FY 2003

| | (E) FFRDCs | (F) | (G) | (H) |
|--|---|---|---|-----------------------------|
| State | administered by universities and colleges | Nonprofit institutions (excluding FFRDCs) | FFRDCs administered by nonprofit institutions | State and local governments |
| West Virginia | ,000 | \$,000 | ,000 | \$,000 |
| Wisconsin | ,000 | \$\$ | \$\$ | ,000 |
| Wyoming | ,000 | \$\$ | \$\$ | ,000 |
| District of Columbia | ,000 | \$\$ | \$,000 | ,000 |
| Puerto Rico | ,000 | \$\$ | \$,000 | \$,000 |
| Other outlying areas (other U.S. | | | | |
| territories and possessions) | \$,000 | \$,,000 | ,000 | \$\$,000 |
| Offices abroad (administered by the U.S. government) | \$,000 | ,000 | \$,000 | \$,000 |
| Total | ,000 | ,000 | ,000 | ,000 |

NOTE: Totals for each column should equal the sum of the two amounts reported for Question 6 in Columns A and B.

Part A2

13. What were your agency's FY 2003 *obligations* for development (both advanced technology development and major systems development) for each state and for each of the 8 types of performers listed below? (*Report dollars in thousands; if none, enter "0."*)

| Definitions for Question 13 | | | | |
|--------------------------------------|---|--|--|--|
| Previously defined terms: | | | | |
| Obligations (See Question 2.) | Industrial firms (See Question 6.) | | | |
| Development (See Question 2.) | Universities and colleges (See Question 6.) | | | |
| Performer (See Question 6.) | Nonprofit institutions (See Question 6.) | | | |
| Federal intramural (See Question 6.) | State and local governments (See Question 6.) | | | |
| | FFRDCs (See Question 6.) | | | |

Obligations for development for FY 2003

| | (A) | (B) | (C) FFRDCs | (D) Universities and |
|-------------|--------------------|-------------------------------------|----------------------------------|-----------------------------|
| State | Federal intramural | Industrial firms (excluding FFRDCs) | administered by industrial firms | colleges (excluding FFRDCs) |
| Alabama | \$,000 | \$,000 | \$,000 | \$,000 |
| Alaska | \$,000 | \$,000 | \$,000 | ,000 |
| Arizona | \$,000 | \$,000 | ,000 | \$,000 |
| Arkansas | \$,000 | \$\$,000 | ,000 | \$,000 |
| California | \$,000 | \$\$,000 | ,000 | \$,000 |
| Colorado | \$,000 | \$\$ | ,000 | \$,000 |
| Connecticut | \$,000 | \$\$ | ,000 | \$,000 |
| Delaware | \$,000 | \$\$ | ,000 | \$,000 |
| Florida | \$,000 | \$\$ | ,000 | \$,000 |
| Georgia | \$,000 | \$\$ | ,000 | \$,000 |
| Hawaii | \$,000 | \$,000 | ,000 | \$,000 |
| Idaho | \$,000 | \$\$,000 | ,000 | \$,000 |
| Illinois | \$,000 | \$\$,000 | ,000 | \$,000 |
| Indiana | \$,000 | \$\$,000 | ,000 | \$,000 |
| Iowa | \$,000 | \$,000 | ,000 | \$,000 |
| Kansas | \$,000 | \$,000 | \$,000 | \$,000 |

Obligations for development for FY 2003

| | (A) | | (B) | | (C) FFRDO | S a | | O) ities and |
|----------------|--------------|--------|-------------------------------|--------|-----------------------------|------------|------------|-----------------|
| State | Federal intr | amural | Industrial f (excluding FF | | administero industrial f | ed by | colleges (| (excluding DCs) |
| Kentucky | \$ | | \$ | _ ,000 | \$ | _,000 | \$ | ,000 |
| Louisiana | \$ | ,000 | \$ | ,000 | \$ | _,000, | \$ | ,000 |
| Maine | \$ | ,000 | \$ | _,000 | \$ | _,000 | \$ | ,000 |
| Maryland | \$ | ,000 | \$ | _,000 | \$ | _,000 | \$ | ,000 |
| Massachusetts | \$ | ,000 | \$ | _,000 | \$ | _,000 | \$ | ,000 |
| Michigan | \$ | ,000 | \$ | _,000 | \$ | _,000 | \$ | ,000 |
| Minnesota | \$ | ,000 | \$ | ,000 | \$ | _,000 | \$ | ,000 |
| Mississippi | \$ | ,000 | \$ | _,000 | \$ | _,000 | \$ | ,000 |
| Missouri | \$ | ,000 | \$ | ,000 | \$ | _,000 | \$ | ,000 |
| Montana | \$ | ,000 | \$ | _,000 | \$ | _,000 | \$ | ,000 |
| Nebraska | \$ | ,000 | \$ | ,000 | \$ | _,000 | \$ | ,000 |
| Nevada | \$ | ,000 | \$ | _,000 | \$ | _,000 | \$ | ,000 |
| New Hampshire | \$ | ,000 | \$ | _,000 | \$ | _,000 | \$ | ,000 |
| New Jersey | \$ | ,000 | \$ | _,000 | \$ | _,000 | \$ | ,000 |
| New York | \$ | ,000 | \$ | _,000 | \$ | _,000 | \$ | ,000 |
| North Carolina | \$ | ,000 | \$ | ,000 | \$ | _,000, | \$ | ,000 |
| North Dakota | \$ | ,000 | \$ | ,000 | \$ | _,000, | \$ | ,000 |
| Ohio | \$ | ,000 | \$ | _,000 | \$ | _,000 | \$ | ,000 |
| Oklahoma | \$ | ,000 | \$ | ,000 | \$ | _,000, | \$ | ,000 |
| Oregon | \$ | ,000 | \$ | ,000 | \$ | _,000, | \$ | ,000 |
| Pennsylvania | \$ | ,000 | \$ | ,000 | \$ | _,000 | \$ | ,000 |
| Rhode Island | \$ | ,000 | \$ | _,000 | \$ | _,000 | \$ | ,000 |
| South Carolina | \$ | ,000 | \$ | _,000 | \$ | _,000 | \$ | ,000 |
| South Dakota | \$ | ,000 | \$ | ,000 | \$ | _,000, | \$ | ,000 |
| Tennessee | \$ | ,000 | \$ | _,000 | \$ | _,000 | \$ | ,000 |

Obligations for development for FY 2003

| | (A) | | (B) | | (C) FFRDCs | , | (D) Universities | e and |
|---|----------------|-------|---------------------------------|-------|----------------------------|-------|---------------------|---------|
| State | Federal intran | nural | Industrial fi (excluding FF) | | administered industrial fi | d by | colleges (exc | luding |
| Texas | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Utah | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Vermont | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Virginia | \$ | ,000 | \$ | ,000, | \$ | ,000 | \$ | _,000 |
| Washington | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| West Virginia | \$ | ,000 | \$ | ,000, | \$ | ,000 | \$ | ,000 |
| Wisconsin | \$ | ,000 | \$ | ,000, | \$ | ,000 | \$ | ,000 |
| Wyoming | \$ | ,000 | \$ | ,000, | \$ | ,000 | \$ | ,000, |
| District of Columbia | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | _ ,000 |
| Puerto Rico | \$ | ,000 | \$ | ,000, | \$ | ,000 | \$ | ,000 |
| Other outlying areas (other U.S. territories and possessions) | \$ | ,000 | \$ | _,000 | \$ | ,000, | \$ | _ ,000, |
| Offices abroad (administered by | | | | | | | | |
| the U.S. government) | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Total | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |

(Columns E through H continued below.)

(Part A2 continued)

Obligations for development for FY 2003

| | (E) FFRDCs | (F) | (G) | (H) |
|---------------|---------------------------|---------------------------------|--|-----------------------------|
| | administered by | Nonprofit | FFRDCs | |
| State | universities and colleges | institutions (excluding FFRDCs) | administered by nonprofit institutions | State and local governments |
| Alabama | \$,000 | \$,000 | \$,000 | \$\$ |
| Alaska | \$,000 | \$,000 | \$,000 | \$,000 |
| Arizona | \$,000 | \$,000 | \$,000 | \$,000 |
| Arkansas | \$,000 | \$,000 | \$,000 | \$\$,000 |
| California | \$,000 | \$,000 | \$,000 | \$,000 |
| Colorado | \$,000 | \$,000 | \$,000 | ,000 |
| Connecticut | ,000 | \$,000 | \$,000 | \$,000 |
| Delaware | ,000 | \$,000 | \$,000 | \$,000 |
| Florida | ,000 | \$,000 | \$,000 | \$,000 |
| Georgia | ,000 | \$,000 | \$,000 | \$,000 |
| Hawaii | ,000 | \$,000 | \$,000 | \$,000 |
| Idaho | ,000 | \$,000 | \$,000 | \$,000 |
| Illinois | ,000 | \$,000 | \$,000 | \$,000 |
| Indiana | \$,000 | \$,000 | \$\$ | \$,000 |
| Iowa | \$,000 | \$,000 | \$,000 | \$,000 |
| Kansas | \$,000 | \$,000 | \$,000 | \$,000 |
| Kentucky | \$,000 | \$,000 | \$,000 | \$,000 |
| Louisiana | \$,000 | \$,,000 | \$\$ | ,000 |
| Maine | \$,,000 | \$,,000 | \$\$ | ,000 |
| Maryland | \$,000 | \$\$,000 | \$\$ | ,000 |
| Massachusetts | \$,000 | \$\$,000 | \$\$ | ,000 |
| Michigan | \$,000 | \$,000 | \$,000 | \$,000 |

Obligations for development for FY 2003

| | (E) FFRDC: | 2 | (F) | | (G) | | (H) | |
|----------------|--------------------------|-------|-------------------------|-------|---------------------|-------|--------------|------|
| State | administere universities | d by | Nonprofi institution | | FFRDCs administered | | State and lo | ocal |
| State | colleges | | (excluding FFI | | nonprofit instit | | governme | |
| Minnesota | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Mississippi | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Missouri | \$ | ,000, | \$ | ,000, | \$ | ,000 | \$ | ,000 |
| Montana | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Nebraska | \$ | ,000, | \$ | ,000, | \$ | ,000, | \$ | ,000 |
| Nevada | \$ | ,000, | \$ | ,000, | \$ | ,000 | \$ | ,000 |
| New Hampshire | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| New Jersey | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| New York | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| North Carolina | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| North Dakota | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Ohio | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Oklahoma | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Oregon | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Pennsylvania | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Rhode Island | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| South Carolina | \$ | ,000, | \$ | ,000 | \$ | ,000, | \$ | ,000 |
| South Dakota | \$ | ,000 | \$ | ,000 | \$ | ,000, | \$ | ,000 |
| Tennessee | \$ | ,000 | \$ | ,000 | \$ | ,000, | \$ | ,000 |
| Texas | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Utah | \$ | ,000, | \$ | ,000 | \$ | ,000, | \$ | ,000 |
| Vermont | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Virginia | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Washington | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | ,000 |

Obligations for development for FY 2003

| | (E) FFRDCs | (F) | (G) | (H) |
|--|---|---|---|-----------------------------|
| State | administered by universities and colleges | Nonprofit institutions (excluding FFRDCs) | FFRDCs administered by nonprofit institutions | State and local governments |
| West Virginia | ,000 | \$,000 | ,000 | \$,000 |
| Wisconsin | ,000 | \$\$ | \$\$ | ,000 |
| Wyoming | ,000 | \$\$ | \$\$ | ,000 |
| District of Columbia | ,000 | \$\$ | \$,000 | ,000 |
| Puerto Rico | ,000 | \$\$ | \$,000 | \$,000 |
| Other outlying areas (other U.S. | | | | |
| territories and possessions) | \$,000 | \$,,000 | ,000 | \$\$,000 |
| Offices abroad (administered by the U.S. government) | \$,000 | ,000 | \$,000 | \$,000 |
| Total | ,000 | ,000 | ,000 | ,000 |

NOTE: Totals for each column should equal sum of the two amounts reported for Question 6 in Columns C and D.

Part B

For the following 10 agencies only:

- U.S. Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, the Interior, and Transportation, the Environmental Protection Agency, NASA, and NSF
- 14. What were your agency's FY 2003 *obligations* for R&D plant for each state and for each type of performer listed below? (*Report dollars in thousands; if none, enter "0."*)

| Definitions for Question 14 | | | | | | |
|--|---|--|--|--|--|--|
| Previously defined terms: | Previously defined terms: | | | | | |
| R&D plant (See Question 1.) | Federal intramural (See Question 6.) | | | | | |
| Obligations (See Question 2.) | Industrial firms (See Question 6.) | | | | | |
| Basic research (See Question 2.) | Universities and colleges (See Question 6.) | | | | | |
| Applied research (See Question 2.) | Nonprofit institutions (See Question 6.) | | | | | |
| Development (See Question 2.) | State and local governments (See Question 6.) | | | | | |
| Performer (See Question 6.) | FFRDCs(See Question 6.) | | | | | |

Obligations for R&D plant for FY 2003

| | (A) | (B) | (C) FFRDCs | (D) Universities and colleges (excluding FFRDCs) | |
|-------------|--------------------|-------------------------------------|----------------------------------|--|--|
| State | Federal intramural | Industrial firms (excluding FFRDCs) | administered by industrial firms | | |
| Alabama | ,000 | ,000 | ,000 | \$\$ | |
| Alaska | \$,000 | ,000 | ,000 | \$,,000 | |
| Arizona | \$,000 | \$\$,000 | ,000 | ,000 | |
| Arkansas | \$,000 | ,000 | ,000 | \$,,000 | |
| California | \$,000 | \$\$ | ,000 | ,000 | |
| Colorado | \$,000 | ,000 | ,000 | \$,,000 | |
| Connecticut | \$,000 | \$\$ | ,000 | ,000 | |
| Delaware | \$,000 | ,000 | ,000 | \$,,000 | |
| Florida | \$,000 | \$\$ | ,000 | ,000 | |
| Georgia | \$\$ | ,000 | ,000 | \$,,000 | |
| Hawaii | \$,000 | \$,000 | ,000 | ,000 | |
| Idaho | \$\$ | ,000 | ,000 | \$\$,000 | |
| Illinois | \$,,000 | \$\$,000 | \$,000 | ,000 | |
| Indiana | ,000 | ,000 | ,000 | \$,000 | |

Obligations for R&D plant for FY 2003

| | (A) | | (B) | | (C) FFRDCs | | (D) Universities and | |
|----------------|--------------------|-------|-------------------------------------|------|----------------------------------|-------|-----------------------------|-------|
| State | Federal intramural | | Industrial firms (excluding FFRDCs) | | administered by industrial firms | | colleges (excluding FFRDCs) | |
| Iowa | \$ | _,000 | \$ | ,000 | \$ | ,000 | \$ | .000, |
| Kansas | \$ | _,000 | \$ | ,000 | \$ | .000, | \$ | .000, |
| Kentucky | \$ | _,000 | \$ | ,000 | \$ | ,000 | \$ | .000, |
| Louisiana | \$ | _,000 | \$ | ,000 | \$ | .000, | \$ | ,000 |
| Maine | \$ | _,000 | \$ | ,000 | \$ | .000, | \$ | .000, |
| Maryland | \$ | _,000 | \$ | ,000 | \$ | .000, | \$ | ,000 |
| Massachusetts | \$ | _,000 | \$ | ,000 | \$ | ,000 | \$ | .000, |
| Michigan | \$ | _,000 | \$ | ,000 | \$ | ,000 | \$ | .000, |
| Minnesota | \$ | _,000 | \$ | ,000 | \$ | .000, | \$ | ,000 |
| Mississippi | \$ | _,000 | \$ | ,000 | \$ | .000, | \$ | ,000 |
| Missouri | \$ | _,000 | \$ | ,000 | \$ | .000, | \$ | .000, |
| Montana | \$ | _,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Nebraska | \$ | _,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Nevada | \$ | _,000 | \$ | ,000 | \$ | .000, | \$ | .000, |
| New Hampshire | \$ | _,000 | \$ | ,000 | \$ | .000, | \$ | ,000 |
| New Jersey | \$ | _,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| New York | \$ | _,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| North Carolina | \$ | _,000 | \$ | ,000 | \$ | .000, | \$ | .000, |
| North Dakota | \$ | _,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Ohio | \$ | _,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Oklahoma | \$ | _,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Oregon | \$ | _,000 | \$ | ,000 | \$ | .000, | \$ | ,000 |
| Pennsylvania | \$ | _,000 | \$ | ,000 | \$ | .000, | \$ | ,000 |
| Rhode Island | \$ | _,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| South Carolina | \$ | _,000 | \$ | ,000 | \$ | .000, | \$ | ,000 |

| | (A) | (B) | (C) FFRDCs | (D) Universities and |
|-------------------------------------|--------------------|-------------------------------------|----------------------------------|-----------------------------|
| State | Federal intramural | Industrial firms (excluding FFRDCs) | administered by industrial firms | colleges (excluding FFRDCs) |
| South Dakota | \$,000 | \$,000 | \$,000 | \$,000 |
| Tennessee | \$,000 | \$,000 | \$,000 | \$,000 |
| Texas | \$,000 | \$,000 | \$,000 | \$,000 |
| Utah | ,000 | \$,000 | \$\$ | \$,000 |
| Vermont | ,000 | \$\$ | \$\$ | \$,000 |
| Virginia | ,000 | \$\$ | \$\$ | \$,000 |
| Washington | ,000 | \$\$ | \$\$ | ,000 |
| West Virginia | ,000 | \$\$ | \$\$ | ,000 |
| Wisconsin | ,000 | \$\$ | \$\$ | \$,000 |
| Wyoming | ,000 | \$\$ | \$\$ | \$,000 |
| District of Columbia | ,000 | \$\$ | \$\$ | ,000 |
| Puerto Rico | ,000 | \$\$ | \$\$ | ,000 |
| Other outlying areas (other U.S. | | | | |
| territories and possessions) | \$,000 | \$,000 | \$,000 | ,000 |
| Offices abroad (administered by the | | | | |
| U.S. government) | \$,000 | ,000 | \$,000 | \$,000 |
| Total | ,000 | ,000 | ,000 | ,000 |

(Columns E through H continued below.)

| | (E) FFRDCs | (F) | (G) | (H) |
|---------------|---------------------------|---------------------------------|--|-----------------------------|
| | administered by | Nonprofit | FFRDCs | G |
| State | universities and colleges | institutions (excluding FFRDCs) | administered by nonprofit institutions | State and local governments |
| Alabama | ,000 | \$\$ | ,000 | \$\$,000 |
| Alaska | ,000 | \$\$ | \$\$,000 | \$\$,000 |
| Arizona | ,000 | \$\$ | \$,000 | ,000 |
| Arkansas | ,000 | \$,000 | \$,000 | \$,000 |
| California | ,000 | \$,000 | \$,000 | \$,000 |
| Colorado | \$,000 | \$,000 | \$,000 | \$,000 |
| Connecticut | \$,000 | \$,000 | \$,000 | \$,000 |
| Delaware | ,000 | \$,000 | \$,000 | \$,000 |
| Florida | ,000 | \$,000 | \$,000 | ,000 |
| Georgia | ,000 | \$,000 | \$,000 | ,000 |
| Hawaii | ,000 | \$,000 | \$,000 | ,000 |
| Idaho | ,000 | \$,000 | \$,000 | \$,000 |
| Illinois | ,000 | \$,000 | \$,000 | \$,000 |
| Indiana | ,000 | \$,000 | \$,000 | ,000 |
| Iowa | ,000 | \$,000 | \$,000 | \$,000 |
| Kansas | ,000 | \$,000 | \$,000 | \$,000 |
| Kentucky | ,000 | \$,000 | \$,000 | \$,000 |
| Louisiana | \$,000 | \$,000 | \$,000 | \$,000 |
| Maine | ,000 | \$,000 | \$,000 | \$,000 |
| Maryland | ,000 | \$,000 | \$,000 | \$,000 |
| Massachusetts | ,000 | \$,000 | \$,000 | \$,,000 |
| Michigan | ,000 | \$,000 | \$,000 | ,000 |
| Minnesota | ,000 | \$,000 | \$,000 | \$,000 |

| | (E) FFRDCs | , | (F) | | (G) | | (H) | |
|----------------|--------------------------|-------|-------------------------------|------|----------------------------------|-------|----------------------|-------|
| | administered | d by | Nonprofi | | FFRDCs | | G 11 | 1 |
| State | universities colleges | | institution (excluding FFI | | administered nonprofit instit | | State and logovernme | |
| Mississippi | \$ | ,000 | \$ | ,000 | \$ | ,000, | \$ | ,000 |
| Missouri | \$ | ,000 | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Montana | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Nebraska | \$ | ,000, | \$ | ,000 | \$ | ,000, | \$ | ,000 |
| Nevada | \$ | ,000, | \$ | ,000 | \$ | ,000, | \$ | ,000 |
| New Hampshire | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| New Jersey | \$ | ,000, | \$ | ,000 | \$ | ,000, | \$ | _,000 |
| New York | \$ | ,000, | \$ | ,000 | \$ | ,000, | \$ | ,000 |
| North Carolina | \$ | ,000 | \$ | ,000 | \$ | ,000, | \$ | _,000 |
| North Dakota | \$ | ,000, | \$ | ,000 | \$ | ,000, | \$ | _,000 |
| Ohio | \$ | ,000, | \$ | ,000 | \$ | ,000, | \$ | _,000 |
| Oklahoma | \$ | ,000, | \$ | ,000 | \$ | ,000, | \$ | ,000 |
| Oregon | \$ | ,000, | \$ | ,000 | \$ | ,000, | \$ | _,000 |
| Pennsylvania | \$ | ,000, | \$ | ,000 | \$ | ,000, | \$ | _,000 |
| Rhode Island | \$ | ,000, | \$ | ,000 | \$ | ,000, | \$ | _,000 |
| South Carolina | \$ | ,000, | \$ | ,000 | \$ | ,000, | \$ | _,000 |
| South Dakota | \$ | ,000, | \$ | ,000 | \$ | ,000, | \$ | ,000 |
| Tennessee | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | _,000 |
| Texas | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | _,000 |
| Utah | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | _,000 |
| Vermont | \$ | ,000, | \$ | ,000 | \$ | ,000, | \$ | ,000 |
| Virginia | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | ,000 |
| Washington | \$ | ,000, | \$ | ,000 | \$ | ,000, | \$ | _,000 |
| West Virginia | \$ | ,000, | \$ | ,000 | \$ | ,000 | \$ | ,000 |

| | (E) FFRDCs | (F) | (G) | (H) |
|--|---|---|---|-----------------------------|
| State | administered by universities and colleges | Nonprofit institutions (excluding FFRDCs) | FFRDCs administered by nonprofit institutions | State and local governments |
| Wisconsin | ,000 | \$,000 | ,000 | \$,000 |
| Wyoming | \$,000 | \$\$ | \$\$ | \$\$,000 |
| District of Columbia | \$\$ | \$\$ | \$\$ | ,000 |
| Puerto Rico | \$\$ | \$,000 | ,000 | \$\$,000 |
| Other outlying areas (other U.S. territories and possessions) | \$,000 | \$\$ | \$,000 | \$,000 |
| Offices abroad (administered by the U.S. government) | \$,,000 | \$,000 | \$,000 | \$,000 |
| Total | ,000 | ,000 | ,000 | ,000 |

NOTE: Totals for each column should equal amounts reported for Question 11 in Column A.

15. What were your agency's FY 2003 obligations to *universities and colleges* for 1) basic research and 2) applied research for each of the fields of science and engineering listed below? (*Report dollars in thousands; if none, enter "0."*)

NOTE: Please *exclude* obligations to FFRDCs located at universities or colleges.

Definitions for Question 15

Previously defined terms:

Obligations (See Question 2.)

Basic research (See Question 2.)

Applied research (See Question 2.)

Your agency's obligations to universities and colleges for FY 2003 research activities (actual)

| Field of science a (See Attachment 1) | and engineering I for classification of fields.) | Basic research FY 2003 | Applied research FY 2003 | Total research FY 2003 |
|---------------------------------------|--|---------------------------|-----------------------------|---------------------------|
| Life Sciences | Biological (excluding environmental) | \$,000 | \$,000 | ,000 |
| | Environmental biology | \$,000 | \$,000 | ,000 |
| | Agricultural science | ,000 | \$,000 | ,000 |
| | Medical sciences | ,000 | \$,000 | ,000 |
| | Life science, not elsewhere classified | \$,000 | ,000 | ,000 |
| Psychology | Biological aspects | ,000 | \$\$ | ,000 |
| | Social aspects | ,000 | \$\$ | ,000 |
| | Psychological sciences, not elsewhere classified | \$,000 | \$,000 | ,000 |
| Physical Sciences | Astronomy | \$,000 | \$,000 | \$,000 |
| | Chemistry | \$,000 | \$,000 | ,000 |
| | Physics | \$,000 | \$,000 | ,000 |
| | Physical sciences, not elsewhere classified | \$,000 | \$,000 | ,000 |
| Environmental | A 4 m a contra miss a cism a contra | \$.000 | \$.000 | Φ 000 |
| Sciences | Atmospheric sciences | ,000 | \$,000 | ,000 |
| | Geological sciences | ,000 | \$,000 | ,000 |
| | Oceanography | ,000 | ,000 | ,000 |

Your agency's obligations to universities and colleges for FY 2003 research activities (actual)

| Field of science at (See Attachment 1 | nd engineering for classification of fields.) | Basic research FY 2003 | Applied research FY 2003 | Total research FY 2003 |
|---------------------------------------|--|---------------------------|-----------------------------|---------------------------|
| | Environmental sciences, not elsewhere classified | \$,000 | \$,000 | ,000 |
| Mathematics and Computer | | | | |
| Sciences | Mathematics | \$,000 | \$,000 | ,000 |
| | Computer sciences | \$,000 | \$,000 | ,000 |
| | Mathematics and | | | |
| | computer sciences, not elsewhere classified | \$,000 | \$,000 | \$,000 |
| Engineering | Aeronautical | ,000 | \$,000 | ,000 |
| | Astronautical | \$,000 | \$,000 | ,000 |
| | Chemical | \$\$ | \$\$ | \$,000 |
| | Civil | \$\$,000 | \$,000 | ,000 |
| | Electrical | \$,000 | \$,000 | ,000 |
| | Mechanical | ,000 | ,000 | ,000 |
| | Metallurgical and materials | \$,,000 | ,000 | \$ |
| | Engineering, not elsewhere classified | \$,000 | \$,000 | ,000 |
| Social Sciences | Anthropology | \$\$ | \$\$ | ,000 |
| | Economics | \$\$ | \$\$ | \$,000 |
| | Political science | \$\$ | \$\$ | ,000 |
| | Sociology | \$,000 | \$,000 | ,000 |
| | Social sciences, not elsewhere classified | \$,000 | \$,000 | \$,000 |
| Other Sciences, no | et elsewhere classified | \$,000 | ,000 | ,000 |
| | Total for all fields | ,000 | ,000 | ,000 |

NOTE: The totals for all fields for 1) basic research, and 2) applied research, should match the amounts reported for Question 6 in Row d, Columns A and B.

Part D

16. What is your best estimate of your agency's FY 2004 *obligations* to universities and colleges for 1) basic research and 2) applied research for each of the fields of science and engineering listed below? (*Report dollars in thousands; if none, enter "0."*)

Definitions for Question 16

Previously defined terms:

Obligations (See Question 2.)

Basic research (See Question 2.)

Applied research (See Question 2.)

Your agency's obligations to universities and colleges for FY 2004 research activities (preliminary estimates)

| Field of science and engineering (See Attachment 1 for classification of fields.) | Basic resea FY 2004 | | applied resea FY 2004 | rch | Total resear FY 2004 | ch |
|---|------------------------|----------|--------------------------|--------|-------------------------|-----|
| Life Sciences | \$ | ,000 \$_ | ,(| 000 \$ | , | 000 |
| Psychology | \$ | ,000 \$_ | ,(| 000 \$ | , | 000 |
| Physical Sciences | \$ | ,000 \$_ | ,(| 000 \$ | , | 000 |
| Environmental Sciences | \$ | ,000 \$_ | ,(| 000 \$ | , | 000 |
| Mathematics and Computer Sciences | \$ | ,000 \$_ | ,(| 000 \$ | , | 000 |
| Engineering | \$ | ,000 \$_ | ,(| 000 \$ | , | 000 |
| Social Sciences | \$ | ,000 \$_ | ,(| 000 \$ | , | 000 |
| Other Sciences, not elsewhere classified | \$ | ,000 \$_ |), | 000 \$ | , | 000 |
| Total all fields | \$ | ,000 \$_ | ,(| 000 \$ | , | 000 |

NOTE: Totals for all fields for 1) basic research, and 2) applied research, should equal amounts reported for Question 7, Row d, Columns A and B.

17. What is your best estimate of your agency's FY 2005 *obligations* to universities and colleges for 1) basic research and 2) applied research for each of the fields of science and engineering listed below? (*Report dollars in thousands; if none, enter "0."*)

Definitions for Question 17

Previously defined terms:

Obligations (See Question 2.)

Basic research (See Question 2.)

Applied research (See Question 2.)

Your agency's obligations to universities and colleges for FY 2005 research activities (preliminary estimates)

| Field of science and engineering (See Attachment 1 for classification of fields.) | Basic research FY 2005 | Applied research FY 2005 | Total research FY 2005 |
|--|---------------------------|-----------------------------|---------------------------|
| Life Sciences | ,000, \$ | \$\$,000 | \$,000 |
| Psychology | \$,000 | \$,,000 | \$,000 |
| Physical Sciences | \$,000 | \$,,000 | ,000 |
| Environmental Sciences | \$,000 | \$,000 | ,000 |
| Mathematics and Computer Sciences | \$\$,000 | ,000 | \$,000 |
| Engineering | \$,000 | \$,,000 | \$,000 |
| Social Sciences | \$,000 | \$,000 | ,000 |
| Other Sciences, not elsewhere classified | \$,000 | ,000 | ,000 |
| Total all fields | \$,000 | ,000 | ,000 |

NOTE: Totals for all fields for 1) basic research, and 2) applied research, should equal amounts reported for Question 8, Row d, Columns A and B.

Attachment 1 Classification for NSF fields of science and engineering

| NSF field | | Examples of disciplines included | |
|--|---|--|---|
| Life sciences Concerned | with the scientific study of living | g organisms and their systems. | |
| Agricultural | Agriculture, general Agricultural chemistry Agricultural production Agronomy Animal sciences Conservation | Fish and wildlife Food science and technology Forestry Horticulture International agriculture Landscape architecture Plant sciences | Renewable natural resources Soils and soil science Phytopathology Phytoproduction Other agricultural, not elsewhere classified |
| Biological (excluding environmental) | Allergies and immunology Anatomy Bacteriology Biochemistry Biogeography Biology Biometry and biostatistics Biophysics Biotechnology Botany Cell biology Ecology | Entomology and parasitology Epidemiology Foods and nutrition studies Genetics Medical anatomy Medical biochemistry Medical immunology Medical microbiology Medical pathology Medical physiology Medical toxicology Microbiology | Neuroscience (biological) Nutrition Pathology, human and animal Pharmacology, human and animal Physical anthropology Physiology, human and animal Virology Zoology Other biological, not elsewhere classified |
| Environmental biology | Ecosystem sciences Evolutionary biology Global warming Limnology Physiological ecology | Population and biotic community ecology Population biology Systematics Other environmental biology, not elsewhere classified | |
| Medical | Anesthesiology Cardiology Colon and rectal surgery Dental/oral surgery Dentistry Dermatology Family medicine Gastroenterology General surgery Geriatric medicine Hematology Internal medicine Neonatal-perinatal medicine Neurological surgery Neurology Nuclear medicine | Nuclear radiology Nursing psychiatry/mental health Obstetrics and gynecology Oncology Ophthalmology Optometry Orthopedics/orthopedic surgery Osteopathic medicine Otolaryngology Pathology Pediatrics Pharmacology Pharmacy Physical and rehabilitative medicine | Plastic surgery Podiatry Preventive medicine Psychiatry Public health Radiation biology/radiobiology Radiology Surgery Thoracic surgery Urology Veterinary medicine Other medical, not elsewhere classified |

| Examples of disciplines included | |
|---|--|
| Administrative services Allied health, other Communication disorders Gerontology Health and medical services Health professions and related services | Medical laboratory sciences and services Midwifery Nursing Nursing technologies Occupational therapy Physical therapy Rehabilitation/therapeutic services |
| es and individual and group characteristic | s and abilities |
| Animal behavior Clinical psychology Comparative psychology Ethology Experimental psychology | s and admittes. |
| Development and personality Educational psychology Industrial and engineering psychology Personnel psychology Social psychology Testing Vocational psychology | |
| sified | |
| g of the material universe and its phenome | ena) |
| Laboratory astrophysics Optical astronomy Radio astronomy | Theoretical astrophysics X-ray, Gamma-ray, neutrino astronomy |
| Analytical Inorganic Organic Organo-metallic | Pharmaceutical Physical Polymer sciences (except biochemistry) |
| Acoustics Atomic and molecular Chemical Condensed matter | Nuclear structure Optics Plasma Solid-state |
| | Administrative services Allied health, other Communication disorders Gerontology Health and medical services Health professions and related services s, and individual and group characteristic Animal behavior Clinical psychology Comparative psychology Ethology Experimental psychology Industrial and engineering psychology Personnel psychology Social psychology Testing Vocational psychology Social psychology Testing Vocational psychology Analytical Inorganic Organic Organo-metallic Acoustics Atomic and molecular |

| SF field | Examples of disciplines include | |
|---|--|--|
| nvironmental sciences (terrestrial and Includes studies concerned with | extraterrestrial) the gross nonbiological properties of the are | eas of the solar system that |
| directly or indirectly affect man | | · |
| Atmospheric sciences | Aeronomy Air pollution Extraterrestrial atmospheres Meteorology Solar Weather modification | , |
| Geological sciences | Engineering geophysics General geology Geodesy and gravity Geomagnetism Hydrology Inorganic geochemistry Isotopic geochemistry Laboratory geophysics | Organic geochemistry Paleomagnetism Physical geography and cartography Seismology Soil sciences Surveying |
| Oceanography | Aquatic biology Biological oceanography Chemical oceanography | Geological oceanograph Marine geophysics Physical oceanography |
| Environmental sciences not elsewher classified | re | |
| Iathematics and computer sciences | | |
| Includes studies that employ log development of methods of open | gical reasoning with the aid of symbols and a ration employing such symbols, and in the ca to automated information systems. | |
| Mathematics | Algebra Analysis Applied mathematics Foundations and logic Geometry Inventory and monitoring | Mathematics, general Numerical analysis Operations research Statistics Topology Trend reporting |
| Computer sciences | Computer and information sci Design, development, and app capabilities to data storage a Information sciences and syste Management information syst Programming languages Systems analysis | olication of computer nd manipulation ems |

| ngingaring | | |
|---|--|------------------------------|
| ngineering Includes studies directed to | ward developing engineering principles or toward i | noking ensaifie minai-1- |
| usable in engineering practi | | making specific principle |
| Aeronautical | Aerodynamics | |
| Astronautical | Aerospace | |
| | Space technology | |
| Chemical | Chemical engineering | |
| | Petroleum | |
| | Petroleum refining process | |
| | Polymer/plastics engineering | |
| | Wood science | |
| Civil | Architectural | Hydrologic |
| | Environmental/environmental | Marine |
| | health engineering | Sanitary and |
| | Geotechnical | environmental |
| | Hydraulic | Structural Transportation |
| | | Transportation |
| Electrical | Communication | |
| | Computer engineering Electronic | |
| | Power | |
| | Tower | |
| Mechanical | Engineering mechanics | |
| | Mechanical engineering | |
| Metallurgy and materials | Ceramic engineering | Metallurgy |
| | Geological engineering | Mining and mineral |
| | Geophysical engineering | engineering |
| | Materials engineering | Textile sciences and |
| | Materials research | engineering |
| | Materials science | Welding |
| | Metallurgical engineering | |
| Engineering not elsewhere classi | | Industrial and |
| | Bioengineering | management |
| | Biomedical | Manufacturing |
| | Engineering, general | engineering |
| | Engineering design | Nuclear |
| | Engineering physics | Ocean engineering |
| | Engineering science | Systems science and theory |

| NSF field Examples of disciplines included | | |
|---|--|--|
| Social sciences Includes studies directed toward an u of individuals as members of a group | understanding of the behavior of social i | institutions and groups and |
| Anthropology | Applied anthropology Archaeology Cultural and personality Ethnology Social anthropology | |
| Economics | Econometrics and economic statistics Economic systems and development History of economic thought Industrial, labor, and agricultural economics | International economics Macroeconomics Microeconomics Public finance and fiscal policy Quantitative Resource Theory |
| Political science | Area or regional studies Comparative government History of political ideas International relations and law National political and legal systems | Political science and government Political theory Public administration |
| Sociology | Area and ethnic studies City/urban, community, and regional planning Comparative and historical Complex organizations Criminal justice and corrections Criminology Culture and social structure | Demography Group interactions Population studies Social problems and socia welfare Sociological theory Urban studies/affairs |
| Social sciences not elsewhere classified | Linguistics Research in education Research in history and philosophy of science Research in law, e.g., attempts to assess impact on society of legal systems and practices Socioeconomic geography | |

Other sciences not elsewhere classified

Includes studies that are multidisciplinary and interdisciplinary that cannot be classified within one of the fields of science and engineering above.