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Report to the Subcommittee on Energy and Water Development, Committee on Appropriations, House of Representatives

April 2004

FEDERAL RESEARCH

Information on DOE's Laboratory-Directed R&D Program

GAO-04-489

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Highlights

Highlights of GAO-04-489, a report to the Subcommittee on Energy and Water Development, Committee on Appropriations, House of Representatives

Why GAO Did This Study

The Department of Energy's (DOE) contractor-operated laboratories perform mission-related research and development (R&D) for DOE and other federal agencies. In 1992, DOE established the Laboratory-Directed Research and Development (LDRD) program, under which laboratory directors may allocate funding to scientists to conduct worthy independent research. DOE allows participating laboratories to support their LDRD programs by including a charge of up to 6 percent of the total project cost in the indirect costs for R&D performed for DOE and other federal agencies.

GAO was asked to address 11 specific questions on DOE's LDRD program regarding:

- DOE's statutory authority for charging other federal agencies for LDRD,
- DOE's policies and procedures for ensuring departmental compliance with statutory requirements and committee report direction,
- the extent to which DOE believes the LDRD program is a necessary tool for recruiting and retaining laboratory scientists, and
- the sources and amounts of LDRD funding that each laboratory received from fiscal year 1998 through fiscal year 2003.

In commenting on the draft report, DOE agreed with its factual accuracy.

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To view the full product, including the scope and methodology, click on the link above. For more information, contact Anu K. Mittal at (202) 512-3841 or mittala@gao.gov.

What GAO Found

- By law, when DOE conducts R&D for other federal agencies and uses a laboratory contractor to carry out the tasks, DOE must recover from the other agency all costs, including LDRD, DOE owes its contractor in performing the work.
- DOE has issued a departmental order and clarifying memoranda and guidance to ensure LDRD program compliance with statutory requirements and congressional direction. For example, the Secretary of Energy's April 2002 guidance requires that agencies funding work at its laboratories be notified about the LDRD program, including the laboratory's indirect-cost rate and an estimate of the associated cost. According to senior budget, legal, and research program officials at six federal agencies that fund work at the DOE laboratories, inclusion of funding for the LDRD program as an indirect cost does not limit their agency's ability to comply with statutory or appropriations requirements.
- Managers at the four DOE laboratories that primarily conduct nuclear weapons and environmental management R&D told us that LDRD is vital for recruiting and retaining top scientists, while managers at the five Office of Science laboratories said that LDRD plays an important, but less vital, role in recruiting and retaining top scientists.
- From fiscal year 1998 through fiscal year 2003, DOE's contractor-operated laboratories spent a total of $1.8 billion, or an average of $296 million per year, on LDRD. DOE accounted for 84 percent and the Department of Defense and the intelligence agencies, through their payments to DOE, accounted for 12 percent of the federal support for the LDRD program in fiscal year 2003.

Federal Funding Support for LDRD, Fiscal Year 2003

Dollars in millions

Laboratory	LDRD funding	Total operating funds	Percentage LDRD
Argonne	$21.0	$481.1	4.4
Brookhaven	7.6	413.1	1.8
Idaho	19.8	701.0	2.8
Lawrence Berkeley	9.8	403.3	2.4
Lawrence Livermore	64.3	1,071.6	6.0
Los Alamos	94.8	1,771.0	5.4
Oak Ridge	15.4	667.5	2.3
Pacific Northwest	17.2	450.6	3.8
Sandia	97.4	1,696.7	5.7
Total	**$347.3**	**$7,655.9**	**4.5**

Source: DOE laboratories.

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Abbreviations

CFO	Chief Financial Officer
DHS	Department of Homeland Security
DOD	Department of Defense
DOE	Department of Energy
DOT	Department of Transportation
INEEL	Idaho National Engineering and Environmental Laboratory
LDRD	Laboratory-Directed Research and Development
NASA	National Aeronautics and Space Administration
NIH	National Institutes of Health
NNSA	National Nuclear Security Administration
NRC	Nuclear Regulatory Commission
R&D	research and development

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United States General Accounting Office
Washington, D.C. 20548

April 30, 2004

The Honorable David L. Hobson
Chairman
The Honorable Peter J. Visclosky
Ranking Member
Subcommittee on Energy and Water Development
Committee on Appropriations
House of Representatives

In fiscal year 2003, the Department of Energy's (DOE) contractor-operated laboratories spent more than $7.9 billion on research and development (R&D) and other operating expenses that supported the department's national nuclear security, energy resources, environmental management, and science programs. To foster scientific excellence at these laboratories, the Atomic Energy Act of 1954, as amended, and other laws have authorized DOE laboratories to use a reasonable amount of laboratory funds to conduct employee-suggested R&D projects selected at the discretion of the laboratory directors.[1] Subsequently, the National Defense Authorization Act for Fiscal Year 1991 authorized the contractor-operated laboratories that receive funding for national security programs to perform laboratory-directed R&D of a creative and innovative nature to maintain the vitality of the laboratories' defense-related scientific disciplines.

In fiscal year 1992, DOE formalized its laboratories' self-initiated R&D programs by establishing the Laboratory-Directed Research and Development (LDRD) program. Under this program DOE's contractor-operated laboratories may fund their LDRD programs by including up to 6 percent of an R&D project's total cost in its indirect cost of doing the work for DOE, other federal agencies, and nonfederal organizations. Total

[1]Among the other laws that DOE cites as general authority for LDRD are the Energy Reorganization Act of 1974, which created the Energy Research and Development Administration to carry out general basic research activities; the Energy Research and Development Administration Appropriation Authorization for Fiscal Year 1977 (codified at 42 U.S.C. § 5817a), which provided authority for any government-owned, contractor-operated laboratory to use a reasonable amount of its operating budget to fund employee-suggested projects up to the pilot stage of development; and the Department of Energy Organization Act, which placed the Energy Research and Development Administration's authorities under DOE and directed DOE to carry out an energy research program. See DOE Order 413.2A.

funding support for the LDRD program grew from $223 million in fiscal year 1992 to $356 million in fiscal year 2003.[2]

Table 1 shows the nine contractor-operated laboratories that participated in DOE's LDRD program in fiscal year 2003. These laboratories include three within the National Nuclear Security Administration (NNSA) that primarily conduct R&D for the nuclear weapons program, five within DOE's Office of Science that primarily perform basic research, and one within the Office of Nuclear Energy, Science, and Technology that primarily performs research for the environmental management program. DOE's appropriations are the source of more than 80 percent of the LDRD funding each year; the remaining funds are reimbursements to DOE that are paid out of appropriations of other federal agencies, or private organizations, to cover the costs DOE incurred in performing work for these entities, primarily through DOE's Work for Others program.

Table 1: LDRD Funding from Federal Sources by DOE Laboratory, Fiscal Year 2003

Dollars in millions

Laboratory	Responsible DOE program office	LDRD funding
Argonne National Laboratory	Office of Science	$21.0
Brookhaven National Laboratory	Office of Science	$7.6
Idaho National Engineering and Environmental Laboratory	Office of Nuclear Energy, Science, and Technology	$19.8
Lawrence Berkeley National Laboratory	Office of Science	$9.8
Lawrence Livermore National Laboratory	NNSA	$64.3
Los Alamos National Laboratory	NNSA	$94.8
Oak Ridge National Laboratory	Office of Science	$15.4
Pacific Northwest National Laboratory	Office of Science	$17.2
Sandia National Laboratories	NNSA	$97.4

Source: DOE and DOE laboratories.

Note: DOE's Ames Laboratory did not spend funds for LDRD in fiscal year 2003, although it has had a small LDRD program in prior years.

The nine DOE laboratories select LDRD projects on their scientific and technical merits without regard to funding origin, provided that the projects will support DOE's national security mission. DOE requires that

[2]All funding totals in this report are in fiscal year 2003 dollars.

LDRD projects focus on the advanced study of scientific or technical problems, experiments directed toward proving a scientific principle, or early analysis of experimental facilities or devices. For example, scientific knowledge gained from Sandia's LDRD project that created crystalline silicotitanate, a material capable of separating highly radioactive cesium from other wastes, led to the development of new technology that could substantially reduce the costs of cleaning up radioactive waste at DOE's Hanford site. Similarly, Lawrence Berkeley's LDRD project on advanced neutron generation has aided in the development of a portable neutron generating device that can be used for detecting explosives and nuclear materials that could be hidden in different types of containers. This device could eventually be used to screen luggage at airports or steel shipping containers at port facilities.

Generally, scientists at each laboratory independently propose projects that peer review panels and laboratory managers prioritize on the basis of their assessment of potential scientific and technical merit and potential strategic impact. The laboratory directors use these assessments to make their selections. In accordance with DOE policy, the selected LDRD projects are reviewed and approved by DOE. In general, projects cost from $100,000 to $300,000 and last 2 to 3 years.

This report addresses the 11 specific questions that you asked us on DOE's LDRD program. To answer these questions, we examined the authorizing legislation, DOE's order and memoranda implementing the LDRD program, LDRD program documents, and financial data for each of the nine contractor-operated laboratories that participate in the LDRD program. We also interviewed cognizant officials at DOE and its nine laboratories. In addition, we interviewed officials at the Departments of Defense (DOD), Homeland Security (DHS), and Transportation (DOT); the National Aeronautics and Space Administration (NASA); the National Institutes of Health (NIH), within the Department of Health and Human Services; and the Nuclear Regulatory Commission (NRC). Through their payments to DOE, these federal agencies were among the primary sources of LDRD funding generated from R&D performed for non-DOE agencies from fiscal years 1998 through 2003. We conducted our review from July 2003 through March 2004 in accordance with generally accepted government auditing standards.

Questions Posed by the Subcommittee and GAO's Responses

Question 1: Does DOE have statutory authority that specifically authorizes it to spend the funds appropriated to other federal agencies and use those funds for LDRD?

GAO Response

The Strom Thurmond National Defense Authorization Act for Fiscal Year 1999 authorizes DOE to conduct R&D at DOE facilities for "other departments and agencies of the government . . ."[3] The act requires that when DOE conducts R&D for other agencies, it impose a charge to recover its costs of conducting the work.[4] The charge must include both direct costs that DOE incurs in carrying out the work and all associated overhead costs.[5] When DOE assesses the charge to recover its costs, the ordering agency transfers amounts from its appropriation to DOE to pay the assessed charge.

An interagency transaction, like that authorized by section 7259a, is not unlike a contractual transaction. Because of a statutory prohibition on transferring funds between two appropriations, federal agencies require specific statutory authority, like section 7259a, to engage in interagency transactions. In other words, federal agencies require statutory authority to contract with each other. Section 7259a permits other federal agencies to contract with DOE for R&D. When other agencies transfer amounts to DOE to pay the charge that DOE assesses under section 7259a, and DOE uses those amounts to defray the costs it incurred in carrying out the work for the other agency, DOE is not "spending" funds appropriated to another agency any more than a private vendor with whom the agency had contracted for services "spends" federal appropriations when it uses amounts received in payment from the federal agency to defray its costs of doing business. As in a contractual transaction, when a federal agency transfers amounts to DOE in payment of the section 7259a charge, the funds transferred become DOE funds and are available for the same purposes and uses as the other amounts in the DOE appropriation account to which they are credited.

[3]Pub. L. No. 105-261, div. C, tit. XXXI, § 3137, 112 Stat. 2248 (1998), codified at 42 U.S.C. § 7259a.

[4]42 U.S.C. § 7259a(b).

[5]42 U.S.C. § 7259a(b)(1)(A), (B).

When DOE agrees to carry out R&D for another agency and conducts the work in one of its laboratories, DOE asks the contractor who operates its laboratory to undertake the R&D tasks. In that case, the cost to DOE of having its contractor conduct these tasks is a direct cost that DOE is required by section 7259a to include in the charge that it assesses the other agency.[6] The other agency is not paying DOE's contractor; in fact, the other agency has no legal relationship with DOE's contractor.

The amount DOE owes its contractor for this work is determined by the terms of the contract that DOE has with its contractor. Included in the amounts DOE pays its contractor is an amount for LDRD. The National Defense Authorization Act for Fiscal Year 1991 requires DOE to pay its laboratory contractors an amount for LDRD, not to exceed 6 percent of the amount that DOE pays to the contractor for national security activities.[7]

Consequently, DOE is not "using" funds appropriated to other federal agencies for LDRD. LDRD is a cost that DOE incurs, both statutorily and contractually, whenever the laboratory's contractor performs work for DOE. When another agency asks DOE to conduct R&D on its behalf, and DOE, in performing that work incurs an LDRD cost, DOE, under section 7259a, properly includes that cost in calculating what it will charge the ordering agency. Just as a private vendor factors its costs of doing business into the price it charges for services rendered, DOE, under section 7259a, must factor its costs of doing business, including LDRD, into the amount it charges other agencies. That DOE might use monies properly transferred from another agency to defray the LDRD amount it owes its laboratory contractor does not mean that DOE is "using" another agency's funds for LDRD any more than a private vendor is using a federal agency's appropriation when it applies amounts paid by a federal agency for services rendered to defray its costs of doing business.

[6]42 U.S.C. § 7259a(b)(1)(A).

[7]Pub. L. No. 101-510, div. C., tit. XXXI, § 3132, 104 Stat. 1832 (1990), codified at 50 U.S.C. § 2791(c) (formerly cited as 42 U.S.C. § 7257a(c)).

Question 2: Congressional appropriations laws must comply with defense and domestic firewalls in Senate budget resolutions adopted by Congress. What mechanism has DOE had in place to ensure that funds appropriated for defense purposes are used only for defense activities and that funds appropriated for domestic purposes are used only for activities in support of those domestic agencies? This question applies to both LDRD conducted with DOE funds and LDRD conducted with funds received from other federal agencies.

GAO Response

As discussed in our response to question 1, DOE's funds support the LDRD programs at participating DOE contractor-operated laboratories—not the appropriations of other agencies. Under the terms of the agreement when another federal agency asks DOE to perform work on its behalf, the agency agrees to reimburse DOE all costs that DOE incurs in performing the work.

In funding and carrying out LDRD, DOE and the laboratories must comply with statutory requirements imposed on them. For example, DOE and its contractor-operated laboratories are required to comply with the National Defense Authorization Act for Fiscal Year 1998,[8] which requires that when DOE uses its appropriation for nuclear weapons activities to pay for LDRD, the LDRD must support projects in DOE's national security mission and when DOE uses its environmental restoration, waste management, or nuclear materials and facilities stabilization appropriation to pay for LDRD, the LDRD must support projects in these mission areas. In addition, the Homeland Security Act of 2002 specifically directs that when DHS orders work from DOE's laboratories, the laboratories must use the associated LDRD funds only for purposes that benefit DHS missions.[9]

Officials at each of the laboratories we visited told us that, because LDRD promotes cutting-edge science and technology, much of the R&D conducted is basic research that, by definition, can result in applications that benefit both defense and civilian agencies. Thus, projects proposed with the intention of supporting a defense mission may lead to cross-cutting applications that benefit Homeland Security or other civilian agencies. Specifically, officials at DOE's weapons laboratories cited

[8]Pub. L. No. 105-85 (1997), codified at 50 U.S.C. § 2792 (formerly cited as 42 U.S.C. § 7257c).

[9]Pub. L. No. 107-296 (2002), codified at 6 U.S.C. § 189(f).

examples in sensor research for identifying traces of radiological and biological agents that had benefited both the nuclear nonproliferation and homeland security missions. They also mentioned LDRD projects that had applications for the NIH's cancer research programs, as well as DHS and DOE.

Question 3: Which federal agencies, in addition to DOE, have a similar process whereby up to 6 percent of funds appropriated to the agency (or any other federal agency) may be diverted to purposes other than those for which the Congress appropriated the funds?

GAO Response

NASA's Jet Propulsion Laboratory, operated by the California Institute of Technology, is the only federal laboratory we identified that includes an assessment on the work performed for other federal agencies to support a laboratory-directed R&D program. In fiscal year 2003, the Jet Propulsion Laboratory Director's R&D Fund received about $91,000 through an assessment of .025 percent on all projects over $250,000 performed for other federal agencies—primarily DOD. The Director's R&D Fund also received $3.5 million from NASA's research directorates that was pro rated on the basis of their expected R&D funding at the Jet Propulsion Laboratory. Similar to DOE's LDRD program, the Director's R&D Fund is designed to promote innovative science and new technology. The fund also encourages collaborative work with the California Institute of Technology, other universities, other federal laboratories, and industry. The Jet Propulsion Laboratory's director awards funding to research projects on the basis of peer review of their scientific merits.

The Air Force's Lincoln Laboratory, operated by the Massachusetts Institute of Technology, has a Directed Defense Research and Engineering program. However, unlike LDRD, the Defense budget provides the Directed Defense Research and Engineering program with about $25 million annually through a direct appropriation from the Congress—Lincoln does not include an assessment in its indirect-cost rate to finance its program.[10] Similar to DOE's LDRD program, Lincoln Laboratory's director awards funding to research projects on the basis of peer review of their scientific

[10]Although Lincoln Laboratory also performs R&D for the Federal Aviation Administration, the National Oceanic and Atmospheric Administration, and NASA, funding from these agencies does not support Lincoln's Directed Defense Research and Engineering program.

merits. The Army and the Navy also reported that their In-house Laboratory Independent Research program is fully funded by their appropriations.

NRC's Center for Nuclear Waste Regulatory Analyses, operated by the Southwest Research Institute, also has a small self-initiated research program. However, NRC's center does not receive funding support from other federal agencies.

Question 4: What mechanisms has DOE had in place to ensure that the department fully complies with all statutory and report language in appropriations bills for itself and other federal agencies when DOE spends funds on their behalf?

GAO Response

DOE has issued a departmental order for the LDRD program and clarifying memoranda and guidance to ensure departmental compliance with statutory requirements and congressional direction in committee reports. These include the following:

- The National Defense Authorization Act for Fiscal Year 1991 established an annual 6-percent funding limit on LDRD. Subsequently, DOE's Order 413.2A established departmental requirements for the LDRD program, and each laboratory establishes a fixed rate for the LDRD assessment each year that ensures compliance with the 6-percent funding limit. DOE officials told us that the department does not need to link the LDRD funding from non-DOE sources to specific LDRD projects because it treats LDRD as an indirect cost that, under cost accounting standards, must be pooled with other LDRD funds and not tracked back to a specific funding source. The DOE officials added that LDRD costs are charged to all laboratory customers at the same rate and are considered a normal cost of doing business.

- The National Defense Authorization Act for Fiscal Year 1998 limited the use of LDRD funds (1) originating from nuclear weapons funding to LDRD projects that support DOE's national security mission and (2) originating from environmental restoration, waste management, or nuclear materials and facilities stabilization for LDRD projects that support these missions. DOE and laboratory LDRD managers told us that they have achieved the act's funding requirements through (1) the identification of areas of emphasis that are likely to benefit DOE's national security and environmental management missions in each

laboratory's annual LDRD program plan and its calls for proposals and (2) the laboratory's LDRD manager's and DOE site office's review of proposals recommended for funding.

- The National Defense Authorization Act for Fiscal Year 1998 also required that DOE report to the Congress on the extent to which the LDRD Program has met the objective of supporting R&D with long-term application to national security. DOE's most recent report to the Congress stated that, in fiscal year 2003, the laboratories spent about $356 million for LDRD, of which defense customers, through reimbursement to DOE, provided $243 million and nondefense customers, through reimbursement to DOE, provided $113 million.[11] DOE concluded that about $268 million of the LDRD funding supported projects expected to benefit the defense and national security missions and about $283 million of the LDRD funding supported projects expected to benefit the nondefense mission areas.

- The Conference Report accompanying the Energy and Water Development Appropriations Act for Fiscal Year 2002 directs that (1) when accepting funds from another federal agency for work, DOE notify the agency in writing how much will be used for LDRD and (2) the Secretary of Energy affirm each year that all LDRD projects support R&D that benefits the sponsoring agencies' programs and are consistent with their appropriations acts.[12] On April 30, 2002, the Secretary of Energy issued a memorandum to the Under Secretary for Nuclear Security and the Under Secretary for Energy, Science and Environment that provided guidance directing that all DOE agreements to perform R&D for other federal agencies provide notice about each participating laboratory's LDRD program, including (1) the applicable indirect-cost rate, (2) an estimate of the associated cost, and (3) an explanation of the LDRD program's purpose. Furthermore, each agreement to perform work states that DOE will conclude that, by approving the agreement and providing funds, the agency acknowledges that LDRD benefits the

[11]This total reflects funding from all sources, including nonfederal organizations.

[12]H.R. Conf. Rep. No. 107-258, at 110 (2001).

agency and is consistent with its appropriation requirements.[13] DOE officials told us that the DOE site office responsible for the laboratory typically sends this notification to the program manager or contracting officer at the sponsoring agency.

- The Homeland Security Act of 2002 requires that DHS funds are not to be expended for LDRD unless such activities support DHS missions. On February 28, 2003, the Secretary of Energy and the Secretary of Homeland Security entered into a Memorandum of Agreement that establishes a framework for DHS to access the capabilities of DOE's national laboratories and production facilities. On April 21, 2003, DOE's Deputy Secretary issued DOE Notice 481.1A, Reimbursable Work for Department of Homeland Security, which provided information on the process by which DHS would place orders for reimbursable work activities at the DOE laboratories. The DOE notice includes provisions that DOE notify DHS of LDRD charges in the cost proposals and that DHS acknowledge the benefits of LDRD prior to final approval. DHS has set up centers at each of the DOE laboratories to facilitate its access, and DOE and DHS are still formalizing their working relationship.

Question 5: To what extent does the leadership of federal agencies that give funds to DOE for its laboratories to conduct R&D on their behalf fully understand that up to 6 percent of the funds may be diverted under DOE's LDRD program to purposes that have nothing to do with the purpose for which the Congress originally appropriated the funds? Please detail the written notifications that DOE has issued in response to the requirement in the Conference Report for the Energy and Water Development Appropriations Act for Fiscal Year 2002 that DOE notify federal agencies in writing how much of their funds may be diverted to LDRD.

[13]DOE's pricing policy states: "Consistent with the Department of Energy's (DOE) full cost recovery policy, DOE collects, as part of its standard indirect cost rate, a Laboratory Directed Research and Development (LDRD) cost. Based on the amount of funds accepted for this project, $___ represents an estimated amount that will be used for LDRD efforts. The Department of Energy believes that LDRD efforts provide opportunities in research that are instrumental in maintaining cutting-edge science capabilities that benefit all of the customers at the laboratory. The Department will conclude that by providing funds to DOE to perform work, you acknowledge that such activities are beneficial to your organization and consistent with appropriations acts that provide funds to you."

GAO Response

Senior officials at each of the six federal agencies we contacted stated that their offices were aware that the DOE laboratories included a charge of up to 6 percent for LDRD in the costs they are required to reimburse DOE. Specifically, the senior officials in the Office of the Chief Financial Officer (CFO) and/or the Office of General Counsel at each agency told us that the LDRD program's inclusion as an indirect cost does not limit their ability to comply with their agency's statutory or appropriations requirements. Similarly, none of the research managers and/or contracting officers at these agencies expressed concern about the LDRD program or its funding method.[14]

In December 2003, at the direction in the Conference Report accompanying the Energy and Water Development Appropriations Act for Fiscal Year 2002, DOE sent the CFOs of 22 agencies information about the LDRD program and its inclusion in the indirect costs for R&D performed at DOE laboratories. Specifically, DOE provided each CFO office, with the exception of DHS, with a copy of the Secretary of Energy's April 2002 memorandum, an explanation of how the LDRD program is funded, and a description of DOE's notification process.[15] However, DOE did not identify a point of contact within each agency's Office of the CFO or provide the CFO's room number, and senior officials in the CFO's office at Transportation and NRC told us that they did not receive DOE's information even though they were the appropriate point of contact. These officials commented on the LDRD program after we provided them with copies of the DOE materials.

Similarly, research managers and/or contracting officers responsible for funding R&D at DOE's contractor-operated laboratories for DOD, DHS, DOT, NASA, NIH, and NRC had differing levels of knowledge about how the LDRD program functioned and how it is funded. For example, the DOD,

[14]NRC officials did not express concern about the LDRD program and its funding; however, they suggested that an agency could better determine whether LDRD benefits its mission if DOE improved its notification procedure by annually (1) providing a single notification signed by DOE's CFO and (2) including information about LDRD activities at those laboratories where the agency funds work.

[15]DOE provided DHS's CFO office with a copy of DOE Notice 481.1A regarding reimbursable work for DHS that included the February 28, 2003, Memorandum of Agreement between DOE and DHS, explaining how DHS work will be funded and conducted at DOE's laboratories.

DHS, and NASA research managers we interviewed had detailed knowledge of the LDRD program. In contrast, research managers at DOT were less familiar with the LDRD program and how it is funded. They told us that this was mainly because the department funds relatively little R&D at the DOE laboratories and the decisions to use the DOE laboratories are made by the departmental agencies.

Question 6: Please identify any instances when another federal agency has refused to pay the LDRD charge assessed by the DOE laboratories on work for other agencies, as well as any instances when the DOE laboratories have voluntarily waived assessment of the LDRD charge on funds received from another federal agency.

GAO Response

None of the officials at the six agencies we contacted cited any instances when their agencies have refused to reimburse DOE for the LDRD charge or expressed concern about the LDRD expense. In June 1998, DOE and NIH signed a Memorandum of Understanding that clarified the terms and conditions of NIH grants awarded to DOE laboratories.[16] Among other things, the Memorandum of Understanding states that (1) the DOE laboratory contractor may be the awardee organization, (2) DOE will waive its 3-percent administrative overhead rate, and (3) while NIH awards will not include an allowance for LDRD, the DOE laboratories may recover LDRD costs from the total funding included in grants awarded to DOE laboratory contractors.

Cognizant officials at DOE and its laboratories told us that they are not aware of any instances in which a federal customer has objected to or stated that they would not reimburse DOE for the LDRD charge. The officials also did not identify any instances in which the DOE laboratories had not charged DOE for the LDRD portion of the work done on another agency's behalf—either voluntarily or involuntarily. Managers at each of the nine DOE laboratories told us that their policy is to use the same indirect cost rate for all R&D and other operations performed at the laboratory.

[16]The requirements of the Secretary's April 2002 memorandum regarding notification to other federal sponsors and their subsequent certifications that LDRD projects benefit their programs do not apply to grants performed under the June 1998 Memorandum of Understanding between NIH and DOE.

Question 7: On April 30, 2002, the Secretary of Energy issued revised LDRD guidance in response to direction provided in the Conference Report for the Energy and Water Development Appropriations for Fiscal Year 2002. Subsequently, DOE's National Nuclear Security Administration (NNSA) and Office of Science issued more detailed guidance to their respective laboratories. What is the status of implementing the changes to the LDRD approval and reporting process as outlined in this guidance? Do these new procedures constitute a firewall between LDRD using defense appropriations and LDRD using nondefense appropriations, as some in DOE have claimed?

GAO Response

DOE has implemented changes to the LDRD approval and reporting process as outlined in the Secretary's memorandum and the NNSA and Office of Science guidance. These changes include having a DOE official review and concur on all LDRD projects prior to approval by laboratory directors and requiring DOE field officials associated with each laboratory to certify annually that LDRD projects benefit the programs of the sponsoring agencies. When approving these projects, DOE does not distinguish whether the projects benefit defense or nondefense activities because, in its view, LDRD projects are new concepts that may benefit more than one area and therefore cannot be categorized in this manner. DOE officials' role in approving proposed LDRD projects is to ensure that the projects support DOE's national security mission. However, as stated earlier, DOE's annual report identifies the amounts of LDRD funding it receives from defense and nondefense sponsors and the amounts of LDRD funding that support projects expected to have primary benefit to defense or nondefense mission areas.

Question 8: Are the laboratories supplementing their funds for LDRD with funds designated for the Strategic Initiative?

GAO Response

None of the nine DOE laboratories has been supplementing funding for LDRD programs with other laboratory funds, such as Idaho National Engineering and Environmental Laboratory's (INEEL) Strategic Initiative, according to officials of DOE's Office of Inspector General; Office of Management Budget and Evaluation; Office of Science; NNSA; Office of Nuclear Energy, Science, and Technology; and the nine laboratories. As stated earlier, DOE's Order 413.2A prohibits DOE's laboratories from using

LDRD funds on projects that will need additional non-LDRD funding to reach their goals.

A May 2003 DOE Inspector General report cited possible misuse of INEEL's Strategic Initiative Fund for LDRD projects.[17] In response, DOE's acting CFO conducted a review of the expenditures in question and determined that no funds were misused and INEEL had not exceeded its LDRD funding limit. The Inspector General accepted the CFO's findings.

Question 9: What does DOE do to ensure, in advance, that different laboratories do not undertake duplicative LDRD projects? What does DOE do to ensure that LDRD projects are not duplicative of research in other federal agencies or in universities?

GAO Response

DOE and its laboratories rely on the scientists, who submit proposals; members of peer review committees; and laboratory managers to ensure that LDRD projects do not duplicate research at other laboratories or universities. According to officials at the four laboratories we visited, the chances for duplication among LDRD projects are remote for several reasons. First, the NNSA laboratories (Los Alamos, Lawrence Livermore, and Sandia) coordinate their work to ensure there is no duplication. Second, peer review groups consisting of laboratory, DOE, industry, and university representatives involve themselves in project management and try to eradicate duplication or other potential wastes of resources. Third, science is a very competitive field, and scientists have strong incentives to conduct original research and publish or present the results of that research. Finally, because basic science explores fundamental principles, scientists may be looking at the same issue, for example, techniques for sensing ever smaller amounts of an element, but for different reasons or with different approaches. In addition, our September 2001 report concluded that the LDRD project-selection and review processes that are in place at the nine DOE laboratories are adequate to reasonably ensure compliance with DOE's project-selection guidelines.[18]

[17]See DOE Office of Inspector General. *Idaho National Engineering and Environmental Laboratory's Strategic Initiative Fund*, DOE/IG-0601 (Washington, D.C.: May 2003).

[18]U.S. General Accounting Office, *National Laboratories: Better Performance Reporting Could Aid Oversight of Laboratory-Directed R&D Program*, GAO-01-927 (Washington, D.C.: Sept. 28, 2001).

Question 10: To what extent does DOE believe that the LDRD program is still a necessary tool to recruit and retain scientists?

GAO Response

Officials at NNSA laboratories told us that LDRD remains a necessary tool to recruit and retain top scientists because their program work provides little opportunity for basic scientific research. Similarly, INEEL officials told us that LDRD plays a major role in attracting and retaining the most qualified scientists and engineers at their laboratory. In comparison, officials at Office of Science laboratories believe that LDRD is important for recruiting and retaining scientists; however, they noted its role is less essential for their laboratories because they primarily perform basic research.

NNSA laboratory managers told us that LDRD is an essential tool for recruiting and retaining scientists for several reasons. As a recruiting tool, the LDRD program is vital because the mission of the NNSA laboratories—to perform applied research to develop nuclear weapons technologies—does not readily attract qualified new hires. The LDRD program has served as a stepping stone for the NNSA laboratories to attract and hire many scientists by supporting from nearly one-half to two-thirds of the post doctoral researchers at the laboratories. For example, one of the three LDRD program components at Los Alamos National Laboratory makes awards to research proposals specifically targeted at post-doctoral candidates. As a result, 262 (61 percent) of the 427 post-doctoral scientists charged substantial amounts of time to LDRD. According to NNSA laboratory managers, post-doctoral scientists who work at their laboratories are more likely to seek permanent employment at the laboratory, and LDRD projects provide opportunities for laboratory managers to evaluate the post-doctoral scientists for future employment. In some cases, the LDRD program also provides meaningful work opportunities at the NNSA laboratories while newly hired scientists wait to receive their security clearances. In addition, the LDRD program provides opportunities for collaboration with universities and other research organizations, thereby providing a pipeline for new employees. As a retention tool, LDRD provides scientists with funding to perform basic and applied research on the cutting edge of their field, improve their technical skills, and make scientific contributions in their fields.

INEEL managers told us that the LDRD program funded 55 percent of the post-doctoral candidates supported by the laboratory in fiscal year 2002.

The managers attributed about 40 percent of the scientists and engineers hired at INEEL in the past 4 years to investments in LDRD.

Managers at the five Office of Science laboratories told us that the LDRD program is important for their efforts to recruit and retain scientists. However, they noted that the LDRD program is less important to their laboratories than it is to the NNSA laboratories, because their laboratories mainly fund basic research. According to laboratories managers, it is basic research and the opportunity for technological advances—whether performed as LDRD or as program work—that attracts and maintains the interest of the top scientists. As a result, the Office of Science laboratories typically devote, at most, slightly over 4 percent of their R&D and other operating funds to LDRD each year and have substantially smaller LDRD programs than the NNSA laboratories.

Question 11: How much has each of the nine DOE laboratories spent on LDRD from fiscal year 1998 through fiscal year 2003, and which federal agencies' funds have been used and in what amounts?

GAO Response

For the 6 years from fiscal year 1998 through fiscal year 2003, DOE's nine laboratories spent a total of $1.8 billion, or an average of $296 million per year, on LDRD. In fiscal year 2003, the laboratories received $7.7 billion from DOE and other federal agencies, through reimbursement to DOE, and spent $347 million, or 4.5 percent, on LDRD. Los Alamos National Laboratory, Sandia National Laboratories, and Lawrence Livermore National Laboratory accounted for $257 million, or 74 percent, of the LDRD funds. DOE, DOD, and the intelligence agencies have been the primary sources of LDRD funding, accounting for 96 percent of the federal support in fiscal year 2003.

Table 2 shows that the nine laboratories received $7.7 billion from DOE and other federal agencies for their R&D and other operating expenses in fiscal year 2003. Specifically, DOE and DOD provided $7.3 billion, or 96 percent, of the federal funding that the laboratories received. NIH, NRC, and NASA provided $190 million, or 2.5 percent, of the funding. DOT and DHS provided only $12.6 million and $9.4 million, respectively, for work at the DOE laboratories.

Table 2: Federal Funding Sources of Each DOE Laboratory's R&D and Other Operating Costs, Fiscal Year 2003

Dollars in millions

Laboratory	DOE	DOD[a]	NIH	NRC	NASA	DOT	DHS[b]	Other agencies	Total
Argonne	$422.2	$25.5	$3.7	$12.6	$2.2	[c]	[c]	$14.8	**$481.1**
Brookhaven	379.3	1.4	10.7	8.9	5.7	[c]	[c]	6.9	**413.1**
Idaho	620.1	68.6	[c]	5.6	[c]	[c]	[c]	6.7	**701.0**
Lawrence Berkeley	341.4	9.8	38.6	[c]	6.3	[c]	[c]	7.1	**403.3**
Lawrence Livermore	933.1	115.7	8.5	1.0	2.5	[c]	6.5	4.3	**1,071.6**
Los Alamos	1,589.6	138.9	18.6	1.9	10.7	1.5	2.5	7.2	**1,771.0**
Oak Ridge	585.1	46.2	1.5	10.3	7.3	4.8	[c]	12.2	**667.5**
Pacific Northwest	358.3	57.6	[c]	7.2	[c]	[c]	[c]	27.5	**450.6**
Sandia	1,291.4	358.2	1.0	22.1	3.0	6.3	[d]	14.6	**1,696.7**
Total	**$6,520.5**	**$821.9**	**$82.6**	**$69.6**	**$37.7**	**$12.6**	**$9.0**	**$101.3**	**$7,655.9**
Percentage of total	85.2	10.7	1.1	0.9	0.5	0.2	0.1	1.3	**100.0**

Source: DOE laboratories.

Note: LDRD funding from non-DOE agencies refers to the LDRD portion of the indirect costs that these agencies reimbursed to DOE for work performed on their behalf. Totals may not add due to rounding.

[a]Includes funding from the Central Intelligence Agency and other intelligence agencies.

[b]The laboratories began tracking DHS funding in fiscal year 2003.

[c]Less than $1 million.

[d]DHS provided a total of $412,000 to Sandia in fiscal year 2003. This funding is included in other federal sources because it was less than $1 million.

Table 3 shows that, in fiscal year 2003, the nine DOE laboratories allocated to LDRD $347 million, or 4.5 percent, of the $7.7 billion they received from DOE and other federal sources, through reimbursement to DOE. Los Alamos National Laboratory, Sandia National Laboratories, and Lawrence Livermore National Laboratory accounted for $257 million, or 74 percent, of the $347 million. DOE's appropriations accounted for $293 million, or 84 percent, of the LDRD funding from federal sources, while $54 million, or 16 percent, originated from other federal agencies, through reimbursement to DOE. DOD and the intelligence agencies accounted for $41 million, or 12 percent. NIH, NRC, and NASA together accounted for $7.5 million, or 2 percent.

Table 3: Federal Sources of LDRD Funding at Each DOE Laboratory, Fiscal Year 2003

Dollars in millions

Laboratory	DOE	DOD[a]	NIH	NRC	NASA	DOT	DHS[b]	Other agencies	Total	Percent LDRD
Argonne	$18.2	$1.4	$0.1	$0.6	$0.1	[c]	[c]	$0.6	**$21.0**	4.4
Brookhaven	7.0	[c]	0.2	0.2	0.1	[c]	[c]	0.1	**7.6**	1.8
Idaho	17.6	1.8	[c]	0.2	[c]	[c]	[c]	0.2	**19.8**	2.8
Lawrence Berkeley	8.3	0.2	1.0	[c]	0.1	[c]	[c]	0.2	**9.8**	2.4
Lawrence Livermore	56.0	6.9	0.5	0.1	0.2	[c]	0.4	0.3	**64.3**	6.0
Los Alamos	85.1	7.4	1.0	0.1	0.6	0.1	0.1	0.4	**94.8**	5.4
Oak Ridge	13.3	1.1	[c]	0.3	0.2	0.1	[c]	0.3	**15.4**	2.3
Pacific Northwest	13.3	2.2	[c]	0.4	[c]	[c]	[c]	1.3	**17.2**	3.8
Sandia	74.4	20.3	0.1	1.2	0.2	0.4	[c]	0.8	**97.4**	5.7
Total	**$293.2**	**$41.3**	**$2.9**	**$3.1**	**$1.5**	**$0.6**	**$0.5**	**$4.2**	**$347.3**	**4.5**
Percentage	84.4	11.9	0.8	0.9	0.4	0.2	0.1	1.2	**100.0**	

Source: DOE laboratories.

Note: LDRD funding from non-DOE agencies refers to the LDRD portion of the indirect costs that these agencies reimbursed to DOE for work performed on their behalf. Totals may not add due to rounding.

[a]Includes funding from the Central Intelligence Agency and other intelligence agencies.

[b]The laboratories began tracking DHS funding in fiscal year 2003.

[c]Less than $50,000.

Appendix 1 provides data on each laboratory's total R&D spending and LDRD spending for DOE and other federal agencies, through reimbursement to DOE, for fiscal years 1998 through 2001, and appendix II provides more detailed data on each laboratory's total R&D spending and LDRD spending by subagency for fiscal years 2002 and 2003. The funding amounts for prior fiscal years are presented in fiscal year 2003 dollars.

Agency Comments

We provided DOE with a draft of this report for its review and comment. In written comments, DOE agreed with the report. (See app. III.) DOE also provided comments to improve the report's technical accuracy, which we incorporated as appropriate.

Scope and Methodology

To assess DOE's statutory authority for charging other federal agencies for LDRD, we researched and analyzed statutes and legislative histories and referred to principles of appropriations law. To identify laboratory-initiated research programs similar to LDRD at other federal agencies' laboratories, we interviewed cognizant officials within DOD, DHS, DOT, NASA, NIH, and NRC. Through their payments to DOE, these federal agencies were among the primary sources of LDRD funding generated from R&D performed for non-DOE agencies from fiscal years 1998 through 2003.

To examine DOE's policies and procedures for ensuring that its laboratories spend LDRD funds in ways that benefit the requesting agencies' programs and are consistent with their appropriation acts, we evaluated DOE's implementing order and documents for the LDRD program and interviewed cognizant officials at DOE and obtained information from its nine contractor-operated laboratories regarding the actions they have taken to improve the program's accountability. In addition, we contacted cognizant officials in the Office of the CFO and/or the Office of General Counsel in DOD, DOT, NASA, NIH, and NRC to determine whether the funding structure of the LDRD program presented issues for their compliance with statutory or appropriations requirements. These five agencies, through their reimbursements to DOE, were among the primary sources of LDRD funding at the nine DOE laboratories from fiscal years 1998 through 2003. We also contacted cognizant officials in the Office of the CFO and the Science and Technology Directorate in DHS because of its special relationship with DOE's laboratories.

To assess whether the LDRD program is a necessary tool for recruiting and retaining laboratory scientists, we obtained information from cognizant officials at each of DOE's nine laboratories about the role that LDRD plays in recruiting and retaining scientists and obtained documentation. We also reviewed laboratories' information on the participation of post-doctoral scientists and others in LDRD research.

To provide data on the sources and amounts of LDRD funding, we obtained data from each laboratory on its operating and LDRD funds for fiscal year 1998 through fiscal year 2003. Specifically, the laboratories provided financial data for each of DOE's major program budgets and for each federal agency that, in a given year, funded more than $1 million in R&D through DOE's Work for Others program. Because the laboratories' prior fiscal year data were in nominal dollars, we converted their current dollars to constant fiscal year 2003 dollars using deflators for nondefense from the

Office of Management and Budget's *Budget of the United States Government*, *Fiscal Year 2005*, *Historical Tables*. We also obtained from key database officials responses to a series of questions focused on data reliability covering issues such as data entry access, quality control procedures, and the accuracy and completeness of the data. Follow-up questions were added whenever necessary. In addition, we reviewed all data provided by the laboratories, investigated all instances where we had questions regarding issues such as categories or amounts, and made corrections as needed. Based on this work, we determined that the financial data provided were sufficiently reliable for the purposes of our report. We did not assess the reliability of the fiscal year 1992 LDRD funding total, which was used for background purposes only.

As arranged with your offices, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after the date of this letter. At that time, we will send copies to the Secretary of Energy, the Director of the Office of Management and Budget, and other interested parties. We will also make copies available to others on request. In addition, the report will be available at no charge on the GAO Web site at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-3841. Key contributors to this report were Richard Cheston, Carol Kolarik, Daren Sweeney, Doreen Feldman, and Hannah Laufe.

Anu K. Mittal
Director, Natural Resources
and Environment

Funding Data for DOE Laboratories Participating in the LDRD Program, Fiscal Years 1998 through 2001

Table 4: Total and LDRD Funding by Sponsor at Argonne National Laboratory, Fiscal Years 1998 through 2001

Dollars in millions

	Fiscal year 1998		Fiscal year 1999		Fiscal year 2000		Fiscal year 2001	
Source of funding	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**
Department of Energy	$425.7	$13.1	$426.0	$16.7	$409.1	$15.3	$411.5	$18.0
Department of Defense	30.6	1.0	27.9	1.3	27.9	1.3	27.3	1.4
Nuclear Regulatory Commission	8.0	0.2	6.3	0.3	7.9	0.4	8.4	0.4
Department of State	1.9	0.1	1.6	0.1	1.4	0.1	1.9	0.1
Department of Health and Human Services	[b]	[c]	[b]	[c]	[b]	[c]	1.5	[c]
Environmental Protection Agency	1.4	[c]	1.1	[c]	1.2	[c]	1.2	0.1
Department of Agriculture	6.7	0.2	7.7	0.3	7.5	0.3	[b]	[c]
Other federal agencies	7.1	0.3	7.6	0.4	7.7	0.4	12.0	0.6
Nonfederal sources	23.6	0.7	23.5	0.8	23.6	0.7	29.2	1.0
Total	**$505.1**	**$15.6**	**$501.6**	**$19.8**	**$486.3**	**$18.4**	**$493.0**	**$21.5**

Source: Argonne National Laboratory.

Note: All funding amounts are in fiscal year 2003 dollars. Totals may not add due to rounding.

[a]Includes all funding that the laboratory billed to DOE for work performed during the fiscal year.

[b]Less than $1 million in total funding.

[c]Less than $50,000 assessed for LDRD.

Table 5: Total and LDRD Funding by Sponsor at Brookhaven National Laboratory, Fiscal Years 1998 through 2001

Dollars in millions

	Fiscal year 1998		Fiscal year 1999		Fiscal year 2000		Fiscal year 2001	
Source of funding	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**
Department of Energy	$416.1	$2.6	$398.9	$4.6	$391.7	$5.5	$406.0	$5.0
National Aeronautics and Space Administration	2.3	[c]	3.1	[c]	8.2	[c]	13.8	[c]
Department of Health and Human Services	5.2	[c]	6.7	[c]	9.1	0.1	11.4	0.1
Department of State	6.7	[c]	5.8	[c]	5.0	[c]	7.0	[c]
Nuclear Regulatory Commission	8.6	0.1	8.2	0.1	8.9	0.2	6.6	0.1
Environmental Protection Agency	2.5	[c]	3.3	[c]	2.9	[c]	1.3	[c]
Department of Defense	3.2	[c]	[b]	[c]	[b]	[c]	[b]	[c]
Department of the Interior	[b]	[c]	1.1	[c]	[b]	[c]	[b]	[c]
Other federal agencies	3.5	[c]	3.5	[c]	1.6	[c]	1.9	[c]
Nonfederal sources	5.0	[c]	3.2	[c]	7.1	0.1	8.3	0.2
Total	**$453.1**	**$2.8**	**$433.9**	**$4.9**	**$434.4**	**$6.0**	**$456.3**	**$5.5**

Source: Brookhaven National Laboratory.

Note: All funding amounts are in fiscal year 2003 dollars. Totals may not add due to rounding.

[a]Includes all funding that the laboratory billed to DOE for work performed during the fiscal year.

[b]Less than $1 million in total funding.

[c]Less than $50,000 assessed for LDRD.

Table 6: Total and LDRD Funding by Sponsor at Idaho National Engineering and Environmental Laboratory, Fiscal Years 2000 and 2001

Dollars in millions

	Fiscal year 2000		Fiscal year 2001	
Source of funding	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**
Department of Energy	$625.8	$3.0	$647.4	$20.9
Department of Defense	58.7	1.4	75.1	2.2
Nuclear Regulatory Commission	9.4	0.2	6.7	0.3
Other federal agencies	3.4	0.1	3.8	0.1
Nonfederal sources	21.4	0.3	22.2	0.5
Total	**$718.7**	**$5.1**	**$755.2**	**$23.9**

Source: Idaho National Engineering and Environmental Laboratory.

Note: Data for fiscal years 1998 and 1999 were not readily available. All funding amounts are in fiscal year 2003 dollars. Totals may not add due to rounding.

[a]Includes all funding that the laboratory billed to DOE for work performed during the fiscal year.

Table 7: Total and LDRD Funding by Sponsor at Lawrence Berkeley National Laboratory, Fiscal Years 1998 through 2001

Dollars in millions

	Fiscal year 1998		Fiscal year 1999		Fiscal year 2000		Fiscal year 2001	
Source of funding	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**
Department of Energy	$291.4	$9.0	$300.4	$9.2	$310.3	$8.5	$326.4	$8.2
Department of Health and Human Services	18.4	0.6	20.4	0.6	22.0	0.6	32.9	0.8
Department of Defense	7.9	0.2	9.4	0.3	11.1	0.3	8.6	0.2
National Aeronautics and Space Administration	6.2	0.2	7.2	0.2	4.6	0.1	5.5	0.1
Environmental Protection Agency	4.9	0.2	5.1	0.2	5.1	0.1	5.0	0.1
Other federal agencies	2.5	0.1	3.2	0.1	1.8	0.1	1.4	[b]
Nonfederal sources	33.5	1.0	32.1	1.0	31.4	0.9	41.4	1.0
Total	**$364.9**	**$11.2**	**$377.7**	**$11.5**	**$386.4**	**$10.5**	**$421.2**	**$10.5**

Source: Lawrence Berkeley National Laboratory.

Note: All funding amounts are in fiscal year 2003 dollars. Totals may not add due to rounding.

[a]Includes all funding that the laboratory billed to DOE for work performed during the fiscal year.
[b]Less than $50,000 assessed for LDRD.

Table 8: Total and LDRD Funding by Sponsor at Lawrence Livermore National Laboratory, Fiscal Years 1998 through 2001

Dollars in millions

	Fiscal year 1998		Fiscal year 1999		Fiscal year 2000		Fiscal year 2001	
Source of funding	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**
Department of Energy	$845.8	$50.7	$823.7	$49.4	$762.1	$30.5	$816.2	$49.0
Department of Defense	65.5	3.9	81.5	4.9	79.5	3.2	65.8	3.9
Defense-related agencies	10.4	0.6	11.5	0.7	12.5	0.5	10.5	0.6
Department of Health and Human Services	6.3	0.4	6.2	0.4	6.4	0.3	5.4	0.3
National Aeronautics and Space Administration	3.4	0.2	3.5	0.2	3.7	0.1	2.1	0.1
Department of Transportation	3.2	0.2	1.8	0.1	[b]	[c]	1.7	0.1
Nuclear Regulatory Commission	1.7	0.1	[b]	[c]	[b]	[c]	[b]	[c]
Other federal agencies	2.9	0.2	4.4	0.3	5.1	0.2	4.8	0.3
Nonfederal sources	83.1	5.0	108.8	6.5	41.0	1.6	35.6	2.1
Total	**$1,022.5**	**$61.3**	**$1,041.4**	**$62.5**	**$910.4**	**$36.4**	**$942.2**	**$56.5**

Source: Lawrence Livermore National Laboratory.

Note: All funding amounts are in fiscal year 2003 dollars. Totals may not add due to rounding.

[a]Includes all funding that the laboratory billed to DOE for work performed during the fiscal year.

[b]Less than $1 million in total funding.

[c]Less than $50,000 assessed for LDRD.

Table 9: Total and LDRD Funding by Sponsor at Los Alamos National Laboratory, Fiscal Years 1998 through 2001

Dollars in millions

	Fiscal year 1998		Fiscal year 1999		Fiscal year 2000		Fiscal year 2001	
Source of funding	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**
Department of Energy	$1,225.5	$67.0	$1,274.8	$72.1	$1,110.2	$43.3	$1,268.6	$71.2
Department of Defense	55.1	3.0	41.5	2.4	52.4	2.1	60.1	3.4
Defense-related agencies	23.0	1.2	28.8	1.6	25.5	1.1	33.8	1.9
Department of Health and Human Services	13.0	0.7	11.5	0.7	11.3	0.4	15.7	0.9
National Aeronautics and Space Administration	9.6	0.5	12.7	0.8	9.3	0.4	7.2	0.4
Department of Transportation	5.1	0.3	4.9	0.3	4.4	0.2	3.8	0.2
Department of State	1.9	0.1	2.3	0.1	2.5	0.1	2.8	0.1
Nuclear Regulatory Commission	3.4	0.2	3.3	0.2	2.7	0.1	2.2	0.1
Internal Revenue Service	2.5	0.1	[b]	[c]	[b]	[c]	[b]	[c]
Department of Commerce	1.8	0.1	[b]	[c]	[b]	[c]	[b]	[c]
Other federal agencies	1.3	0.1	1.6	0.1	0.6	[c]	0.5	[c]
Nonfederal sources	19.3	1.1	20.3	1.2	19.5	0.7	17.7	1.0
Total	**$1,361.3**	**$74.5**	**$1,401.7**	**$79.5**	**$1,238.4**	**$48.4**	**$1,412.4**	**$79.3**

Source: Los Alamos National Laboratory.

Note: All funding amounts are in fiscal year 2003 dollars. Totals may not add due to rounding.

[a]Includes all funding that the laboratory billed to DOE for work performed during the fiscal year.

[b]Less than $1 million in total funding.

[c]Less than $50,000 assessed for LDRD.

Table 10: Total and LDRD Funding by Sponsor at Oak Ridge National Laboratory, Fiscal Years 1998 through 2001

Dollars in millions

	Fiscal year 1998		Fiscal year 1999		Fiscal year 2000		Fiscal year 2001	
Source of funding	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**
Department of Energy	$587.8	$13.3	$578.6	$12.5	$509.4	$13.0	$510.1	$12.9
Department of Defense	27.3	0.8	31.1	0.7	32.4	0.8	30.1	0.8
Nuclear Regulatory Commission	13.7	0.3	11.8	0.2	9.7	0.2	7.5	0.2
Department of Transportation	11.0	0.1	9.8	0.1	8.7	0.1	6.3	0.1
Environmental Protection Agency	4.1	0.1	5.3	0.1	4.8	0.1	4.6	0.1
National Aeronautics and Space Administration	3.8	0.1	4.6	0.1	5.5	0.1	4.3	0.1
Department of Health and Human Services	3.0	[c]	2.8	[c]	2.5	[c]	1.5	[c]
U.S. Postal Service	9.0	0.1	7.4	0.1	2.5	[c]	[b]	[c]
National Institute of Standards and Technology	2.6	[c]	[b]	[c]	[b]	[c]	[b]	[c]
Agency for International Development	1.1	[c]	[b]	[c]	[b]	[c]	[b]	[c]
Federal Emergency Management Agency	1.5	[c]	2.2	[c]	1.3	[c]	[b]	[c]
Other federal agencies	1.9	[c]	4.2	[c]	3.4	[c]	3.6	0.1
Nonfederal sources	17.0	0.6	20.5	0.6	27.3	0.7	30.7	0.7
Total	**$683.8**	**$15.5**	**$678.4**	**$14.6**	**$607.5**	**$15.2**	**$598.9**	**$15.0**

Source: Oak Ridge National Laboratory.

Note: All funding amounts are in fiscal year 2003 dollars. Totals may not add due to rounding.

[a]Includes all funding that the laboratory billed to DOE for work performed during the fiscal year.

[b]Less than $1 million in total funding.

[c]Less than $50,000 assessed for LDRD.

Table 11: Total and LDRD Funding by Sponsor at Pacific Northwest National Laboratory, Fiscal Years 1998 through 2001

Dollars in millions

	Fiscal year 1998		Fiscal year 1999		Fiscal year 2000		Fiscal year 2001	
Source of funding	Total funding[a]	LDRD funding	Total funding[a]	LDRD funding	Total funding[a]	LDRD funding	Total funding[a]	LDRD funding
Department of Energy	$455.0	$11.3	$431.5	$12.2	$429.7	$10.9	$423.8	$12.6
Department of Defense	40.0	1.1	31.6	1.1	36.6	1.1	40.6	1.3
Nuclear Regulatory Commission	4.1	0.2	5.0	0.2	5.0	0.2	4.9	0.2
Environmental Protection Agency	2.1	0.1	2.3	0.1	1.5	0.1	1.2	[c]
Other federal agencies	9.7	0.4	10.0	0.5	11.8	0.6	12.1	0.7
Nonfederal sources	[b]	[c]	0.1	[c]	0.4	[c]	0.6	[c]
Total	**$510.9**	**$13.1**	**$480.3**	**$14.1**	**$484.9**	**$12.9**	**$483.1**	**$14.8**

Source: Pacific Northwest National Laboratory.

Note: All funding amounts are in fiscal year 2003 dollars. Totals may not add due to rounding.

[a]Includes all funding that the laboratory billed to DOE for work performed during the fiscal year.

[b]Less than $1 million in total funding.

[c]Less than $50,000 assessed for LDRD.

Table 12: Total and LDRD Funding by Sponsor at Sandia National Laboratories, Fiscal Years 1998 through 2001

Dollars in millions

	Fiscal year 1998		Fiscal year 1999		Fiscal year 2000		Fiscal year 2001	
Source of funding	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**
Department of Energy	$1,151.2	$65.8	$1,160.9	$67.6	$1,091.9	$40.2	$1,109.8	$57.7
Department of Defense	202.4	11.5	190.8	11.1	193.9	7.7	226.6	11.2
Defense-related agencies	34.9	2.0	33.7	2.0	37.9	1.5	36.0	1.8
Nuclear Regulatory Commission	10.4	0.6	10.5	0.6	9.9	0.4	7.2	0.4
Department of Transportation	6.0	0.3	4.7	0.3	5.7	0.2	5.3	0.3
National Aeronautics and Space Administration	2.0	0.1	3.7	0.2	5.4	0.2	3.1	0.2
Department of the Interior	[b]	[c]	[b]	[c]	1.9	0.1	[b]	[c]
Other federal agencies	7.2	0.4	11.3	0.7	10.9	0.4	10.9	0.5
Nonfederal sources	60.4	3.3	64.5	3.7	69.8	2.9	61.7	3.1
Total	**$1,474.6**	**$84.1**	**$1,479.9**	**$86.1**	**$1,427.2**	**$53.7**	**$1,460.6**	**$75.1**

Source: Sandia National Laboratories.

Note: All funding amounts are in fiscal year 2003 dollars. Totals may not add due to rounding.

[a]Includes all funding that the laboratory billed to DOE for work performed during the fiscal year.

[b]Less than $1 million in total funding.

[c]Less than $50,000 assessed for LDRD.

Funding Data for DOE Laboratories Participating in the LDRD Program, Fiscal Years 2002 and 2003

Table 13: Total and LDRD Funding by Sponsor at Argonne National Laboratory, Fiscal Years 2002 and 2003

Dollars in millions

	Fiscal year 2002		Fiscal year 2003	
Source of funding	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**
Department of Energy				
Counter Intelligence	$1.1	$0.1	$1.2	$0.1
Energy Assurance	[b]	[c]	3.5	0.1
Energy Efficiency and Renewable Energy	43.2	1.8	41.3	2.0
Environmental Management	25.0	0.9	21.9	0.5
Fossil Energy	5.3	0.3	5.3	0.3
National Nuclear Security Administration	31.7	1.4	30.8	1.4
Nuclear Energy, Science, and Technology	84.7	4.1	79.2	3.9
Radioactive Waste Management	2.4	0.1	2.4	0.1
Science	228.7	8.9	232.7	9.6
Security	1.8	0.1	[d]	[d]
DOE related[e]	[b]	[c]	2.2	0.1
Other DOE sponsors	2.4	0.1	1.8	0.1
Department of Defense				
Air Force	1.5	0.1	1.5	0.1
Army	14.5	0.7	14.2	0.7
Navy	2.7	0.1	3.0	0.2
Defense Nuclear Agency	[b]	[c]	5.7	0.3
Defense Advanced Research Projects Agency	[b]	[c]	1.1	0.1
Other Defense agencies	[b]	[c]	0.1	[c]
Nuclear Regulatory Commission	9.5	0.5	12.6	0.6
Department of Agriculture	7.6	0.3	6.3	0.2
National Aeronautics and Space Administration	1.2	0.1	2.2	0.1
Environmental Protection Agency	1.4	0.1	1.7	0.1
National Institutes of Health	2.7	[c]	3.7	0.1
Department of the Interior	1.1	0.1	1.1	0.1
Department of State	1.6	0.1	3.3	0.1
Other federal agencies	6.1	0.3	2.4	0.1
Nonfederal sources	40.9	1.2	36.3	1.4
Total	**$517.0**	**$21.3**	**$517.4**	**$22.4**

Source: Argonne National Laboratory.

Note: All funding amounts are in fiscal year 2003 dollars. Totals may not add due to rounding.

[a]Includes all funding that the laboratory billed to DOE for work performed during the fiscal year.

[b]Less than $1 million in total funding.

[c]Less than $50,000 in LDRD funding.

[d]Includes Office of Security funding.

[e]Includes work for other DOE laboratories, contractors, and/or facilities.

Table 14: Total and LDRD Funding by Sponsor at Brookhaven National Laboratory, Fiscal Years 2002 and 2003

Dollars in millions

	Fiscal year 2002		Fiscal year 2003	
Source of funding	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**
Department of Energy				
Energy Efficiency and Renewable Energy	$6.2	$0.1	$5.8	$0.1
Environmental Management	37.8	0.4	38.5	0.7
National Nuclear Security Administration	30.1	0.2	32.1	0.6
Nuclear Energy, Science, and Technology	3.4	0.1	3.1	0.1
Science	288.7	5.4	260.4	4.9
DOE related[b]	29.1	0.1	36.1	0.6
Other DOE sponsors	1.5	[c]	3.3	0.1
Department of Defense	[d]	[c]	1.4	[c]
Nuclear Regulatory Commission	7.3	0.2	8.9	0.2
National Aeronautics and Space Administration	14.6	[c]	5.7	0.1
Environmental Protection Agency	1.5	[c]	1.1	[c]
National Institutes of Health	11.6	[c]	10.7	0.2
Department of State	7.2	[c]	3.1	0.1
Other federal agencies	2.7	[c]	2.8	[c]
Nonfederal sources	19.3	0.3	15.7	0.3
Total	**$461.2**	**$6.9**	**$428.7**	**$7.8**

Source: Brookhaven National Laboratory.

Note: All funding amounts are in fiscal year 2003 dollars. Totals may not add due to rounding.

[a]Includes all funding that the laboratory billed to DOE for work performed during the fiscal year.

[b]Includes work for other DOE laboratories, contractors, and/or facilities.

[c]Less than $50,000 in LDRD funding.

[d]Less than $1 million in total funding.

Table 15: Total and LDRD Funding by Sponsor at Idaho National Engineering and Environmental Laboratory, Fiscal Years 2002 and 2003

Dollars in millions

	Fiscal year 2002		Fiscal year 2003	
Source of funding	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**
Department of Energy				
Counter Intelligence	$1.6	$0.1	$1.5	$0.1
Energy Assurance	[b]	[c]	1.1	[c]
Energy Efficiency and Renewable Energy	11.5	0.4	11.7	0.3
Environment, Safety, and Health	[b]	[c]	1.1	[c]
Environmental Management	470.1	14.8	476.2	13.5
Fossil Energy	3.3	0.1	2.7	0.1
Intelligence	[b]	[c]	1.1	[c]
National Nuclear Security Administration	61.2	2.1	59.0	1.8
Nuclear Energy, Science, and Technology	15.5	0.4	20.0	0.5
Science	5.9	0.2	7.4	0.2
Security	1.1	[c]	1.6	0.1
DOE related[d]	23.5	0.8	35.1	1.0
Other DOE sponsors	3.4	0.1	1.7	[c]
Department of Defense				
Army	76.8	1.9	49.7	1.3
Navy	[b]	[c]	1.0	[c]
Other Defense agencies	11.0	0.4	17.8	0.4
Nuclear Regulatory Commission	5.7	0.2	5.6	0.2
Other federal agencies	4.5	0.1	6.7	0.2
Nonfederal sources	19.3	0.3	21.7	0.4
Total	**$714.4**	**$21.9**	**$722.7**	**$20.2**

Source: Idaho National Engineering and Environmental Laboratory.

Note: All funding amounts are in fiscal year 2003 dollars. Totals may not add due to rounding.

[a]Includes all funding that the laboratory billed to DOE for work performed during the fiscal year.

[b]Less than $1 million in total funding.

[c]Less than $50,000 in LDRD funding.

[d]Includes work for other DOE laboratories, contractors, and/or facilities.

Table 16: Total and LDRD Funding by Sponsor at Lawrence Berkeley National Laboratory, Fiscal Years 2002 and 2003

Dollars in millions

	Fiscal year 2002		Fiscal year 2003	
Source of funding	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**
Department of Energy				
Energy Efficiency and Renewable Energy	$30.7	$1.0	$30.0	$0.8
Environmental Management	6.7	0.2	4.2	0.1
Fossil Energy	7.0	0.2	6.9	0.2
National Nuclear Security Administration	4.4	0.1	6.1	0.2
Science	302.6	7.5	271.2	6.5
DOE related[b]	27.5	0.7	22.0	0.5
Other DOE sponsors	[c]	[d]	1.0	0.1
Department of Defense				
Army	3.3	0.1	4.6	0.1
Navy	1.7	[d]	[c]	[d]
Defense Advanced Research Projects Agency	3.2	0.1	3.2	[d]
Other Defense agencies	2.2	0.1	2.0	0.1
National Aeronautics and Space Administration	6.9	0.1	6.3	0.1
Environmental Protection Agency	4.4	0.2	4.2	0.1
National Institutes of Health	39.7	1.2	38.6	1.0
Other federal agencies	2.1	0.1	2.9	0.1
Nonfederal sources	34.0	1.0	38.2	0.9
Total	**$477.0**	**$12.6**	**$441.5**	**$10.7**

Source: Lawrence Berkeley National Laboratory.

Note: All funding amounts are in fiscal year 2003 dollars. Totals may not add due to rounding.

[a]Includes all funding that the laboratory billed to DOE for work performed during the fiscal year.

[b]Includes work for other DOE laboratories, contractors, and/or facilities.

[c]Less than $1 million in total funding.

[d]Less than $50,000 in LDRD funding.

Table 17: Total and LDRD Funding by Sponsor at Lawrence Livermore National Laboratory, Fiscal Years 2002 and 2003

Dollars in millions

	Fiscal year 2002		Fiscal year 2003	
Source of funding	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**
Department of Energy				
Energy Efficiency and Renewable Energy	$6.3	$0.4	$6.1	$0.4
Environmental Management	42.8	2.6	50.6	3.0
National Nuclear Security Administration	689.0	41.3	691.5	41.5
Nuclear Energy, Science, and Technology	[b]	[c]	1.6	0.1
Science	57.2	3.4	53.4	3.2
DOE related[d]	83.0	5.0	85.5	5.1
Other DOE sponsors	44.8	2.7	44.4	2.7
Department of Defense				
Air Force	10.4	0.6	4.6	0.3
Army	17.3	1.0	20.6	1.2
Navy	13.0	0.8	8.4	0.5
Ballistic Missile Defense Organization	1.2	0.1	1.0	0.1
Office of the Secretary of Defense	6.1	0.4	6.2	0.4
Defense Advanced Research Projects Agency	11.9	0.7	13.2	0.8
Defense Intelligence Agency	2.6	0.2	1.9	0.1
Defense Threat Reduction Agency	13.5	0.8	22.8	1.4
National Security Agency	9.4	0.6	4.1	1.4
Other Defense agencies	0.5	[c]	1.9	0.1
Defense-related agencies	6.3	0.4	30.8	1.8
Nuclear Regulatory Commission	1.1	0.1	[b]	[c]
Department of State	1.1	0.1	1.1	0.1
National Aeronautics and Space Administration	3.4	0.2	2.5	0.2
Department of Homeland Security	[e]	[e]	6.5	0.4
National Institutes of Health	5.4	0.3	8.5	0.5
Other federal agencies	3.9	0.2	4.2	0.3
Nonfederal sources	29.7	1.8	22.1	1.3
Total	**$1,059.9**	**$63.6**	**$1,093.7**	**$65.6**

Source: Lawrence Livermore National Laboratory.

Note: All funding amounts are in fiscal year 2003 dollars. Totals may not add due to rounding.

[a]Includes all funding that the laboratory billed to DOE for work performed during the fiscal year.

[b]Less than $1 million in total funding.

[c]Less than $50,000 in LDRD funding.

[d]Includes work for other DOE laboratories, contractors, and/or facilities.

[e]DHS began working with DOE's laboratories in fiscal year 2003.

Table 18: Total and LDRD Funding by Sponsor at Los Alamos National Laboratory, Fiscal Years 2002 and 2003

Dollars in millions

	Fiscal year 2002		Fiscal year 2003	
Source of funding	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**
Department of Energy				
Energy Efficiency and Renewable Energy	$18.1	$1.0	$15.9	$0.8
Environmental Management	102.2	5.7	89.2	4.8
National Nuclear Security Administration	1,296.1	72.3	1,329.8	71.2
Nuclear Energy, Science, and Technology	31.5	1.8	28.1	1.5
Science	78.9	4.4	67.6	3.6
DOE related[b]	44.6	2.5	43.6	2.3
Other DOE sponsors	11.9	0.7	15.4	0.8
Department of Defense				
Air Force	11.9	0.7	8.1	0.4
Army	5.9	0.3	4.3	0.2
Navy	5.1	0.3	4.0	0.2
Defense Threat Reduction Agency	39.0	2.2	48.2	2.6
Defense Advanced Research Projects Agency	4.2	0.2	4.0	0.2
Missile Defense Agency	1.1	0.1	1.6	0.1
Research, Development, and Testing	6.3	0.4	6.7	0.4
Other Defense agencies	0.2	[c]	0.5	[c]
Defense-related agencies	39.4	2.2	61.4	3.3
Nuclear Regulatory Commission	1.9	0.1	1.9	0.1
Department of Transportation	5.2	0.3	1.5	0.1
National Aeronautics and Space Administration	6.5	0.4	10.7	0.6
Department of State	4.9	0.3	5.7	0.3
National Institutes of Health	16.9	0.9	18.6	1.0
Department of Homeland Security	[d]	[d]	2.5	0.1
Other federal agencies	0.6	[c]	1.5	0.1
Nonfederal sources	19.3	1.1	23.5	1.3
Total	**$1,751.6**	**$97.6**	**$1,794.5**	**$96.1**

Source: Los Alamos National Laboratory.

Note: All funding amounts are in fiscal year 2003 dollars. Totals may not add due to rounding.

[a]Includes all funding that the laboratory billed to DOE for work performed during the fiscal year.

[b]Includes work for other DOE laboratories, contractors, and/or facilities.

[c]Less than $50,000 in LDRD funding.

[d]DHS began working with DOE's laboratories in fiscal year 2003.

Table 19: Total and LDRD Funding by Sponsor at Oak Ridge National Laboratory, Fiscal Years 2002 and 2003

Dollars in millions

	Fiscal year 2002		Fiscal year 2003	
Source of funding	Total funding[a]	LDRD funding	Total funding[a]	LDRD funding
Department of Energy				
Counter Intelligence	$1.5	[b]	$1.5	$0.1
Energy Efficiency and Renewable Energy	124.1	2.4	119.6	2.3
Environmental Management	32.1	0.9	11.3	0.3
Environment, Safety, and Health	2.2	0.1	2.2	0.1
Fossil Energy	12.3	0.3	11.9	0.3
National Nuclear Security Administration	67.1	1.4	93.0	1.8
Nuclear Energy, Science, and Technology	20.0	0.6	27.4	0.8
Science	215.8	5.9	244.1	5.7
Security	5.2	0.3	6.3	0.3
DOE-related[c]	64.8	1.6	67.2	1.6
Other DOE sponsors	0.7	[b]	0.6	[b]
Department of Defense				
Air Force	1.5	[b]	4.0	0.1
Army	20.0	0.5	16.2	0.4
Navy	1.3	[b]	4.5	0.1
Defense Threat Reduction Agency	1.7	[b]	2.9	0.1
Defense Logistics Agency	3.4	0.1	3.7	0.1
Defense Advanced Research Projects Agency	5.7	0.1	6.8	0.2
Other Defense agencies	1.1	[b]	8.0	0.2
Nuclear Regulatory Commission	7.8	0.3	10.3	0.3
Department of Transportation				
Federal Highway Administration	3.4	0.1	2.7	0.1
Other Transportation agencies	2.9	[b]	2.2	[b]
National Aeronautics and Space Administration	4.4	0.1	7.3	0.2
Environmental Protection Agency	4.7	0.1	3.9	0.1

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Dollars in millions

Source of funding	Fiscal year 2002 Total funding[a]	Fiscal year 2002 LDRD funding	Fiscal year 2003 Total funding[a]	Fiscal year 2003 LDRD funding
National Institutes of Health	1.1	[b]	1.5	[b]
National Institute of Standards and Technology	[d]	[b]	1.6	[b]
Department of State	1.4	[b]	1.6	[b]
Federal Emergency Management Agency	[d]	[b]	1.1	[b]
Other federal agencies	5.0	0.1	4.0	0.1
Nonfederal sources	21.6	0.7	23.1	0.7
Total	**$633.1**	**$15.7**	**$690.5**	**$16.1**

Source: Oak Ridge National Laboratory.

Note: All funding amounts are in fiscal year 2003 dollars. Totals may not add due to rounding.

[a]Includes all funding that the laboratory billed to DOE for work performed during the fiscal year.

[b]Less than $50,000 in LDRD funding.

[c]Includes work for other DOE laboratories, contractors, and/or facilities.

[d]Less than $1 million in total funding.

Table 20: Total and LDRD Funding by Sponsor at Pacific Northwest National Laboratory, Fiscal Years 2002 and 2003

Dollars in millions

	Fiscal year 2002		Fiscal year 2003	
Source of funding	**Total funding[a]**	**LDRD funding**	**Total funding[a]**	**LDRD funding**
Department of Energy				
Counter Intelligence	$14.2	$0.5	$11.8	$0.5
Energy Efficiency and Renewable Energy	26.7	1.0	31.3	1.2
Environment, Safety, and Health	1.2	[b]	1.7	0.1
Environmental Management	76.7	3.1	53.8	2.4
Fossil Energy	5.3	0.2	7.6	0.3
Intelligence	4.9	0.2	3.5	0.2
National Nuclear Security Administration	138.2	2.7	135.2	3.2
Science	81.4	2.8	112.0	3.5
Security	5.8	0.2	3.8	0.2
Chief Information Officer	[c]	[b]	2.1	0.1
DOE related[d]	50.4	2.1	(5.8)[e]	1.8
Other DOE sponsors	17.3	0.2	1.3	0.1
Department of Defense				
Air Force	9.7	0.4	9.7	0.4
Army	21.1	0.9	20.0	0.9
Navy	1.9	0.1	2.7	0.1
Other Defense agencies	6.0	0.2	25.2	0.8
Bonneville Power Administration	[c]	[b]	2.9	0.1
Nuclear Regulatory Commission	4.7	0.2	7.2	0.4
Department of State	3.8	0.2	1.2	0.1
Department of the Treasury/Internal Revenue Service	[c]	[b]	2.6	0.1
Environmental Protection Agency	1.9	0.1	1.6	0.1
Other federal agencies	14.2	0.6	19.3	1.0
Nonfederal sources	1.3	0.1	2.1	0.1
Total	**$486.9**	**$15.9**	**$452.7**	**$17.3**

Source: Pacific Northwest National Laboratory.

Note: All funding amounts are in fiscal year 2003 dollars. Totals may not add due to rounding.

[a]Includes all funding that the laboratory billed to DOE for work performed during the fiscal year.

[b]Less than $50,000 in LDRD funding.

[c]Less than $1 million in total funding.

[d]Includes work for other DOE laboratories, contractors, and/or facilities.

[e]Net interlaboratory/intersite transfers at Pacific Northwest for fiscal year 2003 resulted in a negative number.

Table 21: Total and LDRD Funding by Sponsor at Sandia National Laboratories, Fiscal Years 2002 and 2003

Dollars in millions

	Fiscal year 2002		Fiscal year 2003	
Source of funding	Total funding[a]	LDRD funding	Total funding[a]	LDRD funding
Department of Energy				
Counter Intelligence	$2.8	$0.1	$2.7	$0.2
Energy Assurance	[b]	[c]	3.0	0.2
Energy Efficiency and Renewable Energy	42.3	2.4	38.6	2.3
Environmental Management	49.1	2.8	42.0	2.5
Fossil Energy	7.1	0.4	6.8	0.4
Intelligence	3.0	0.1	3.3	0.2
National Nuclear Security Administration	995.9	53.8	1,071.1	61.7
Nuclear Energy, Science, and Technology	2.5	0.1	3.8	0.2
Science	39.3	2.2	41.9	2.4
Security	10.1	0.5	12.3	0.7
DOE related[d]	68.0	3.5	65.3	3.6
Other DOE sponsors	0.7	0.1	0.8	0.1
Department of Defense				
Air Force	96.6	4.9	122.9	6.9
Army	66.7	3.5	69.2	4.1
Navy	42.2	2.1	55.3	3.1
Weapons Parts and Assemblies	1.4	0.1	1.8	0.1
Office of the Secretary of Defense	1.1	0.1	1.4	0.1
Strategic Defense Initiative Organization	3.0	0.1	5.3	0.2
Defense Nuclear Agency	24.3	1.2	38.3	2.2
Defense Advanced Research Projects Agency	19.2	1.0	17.5	1.0
Other Defense agencies	5.8	0.3	10.8	0.5
Defense-related agencies	43.7	2.0	35.8	2.0
Nuclear Regulatory Commission	12.9	0.6	22.1	1.2
Department of Transportation	7.0	0.4	6.3	0.4
National Aeronautics and Space Administration	4.3	0.2	3.0	0.2
Environmental Protection Agency	2.0	0.1	[b]	[c]
National Institutes of Health	[b]	[c]	1.0	0.1

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Dollars in millions

Source of funding	Fiscal year 2002 Total funding[a]	Fiscal year 2002 LDRD funding	Fiscal year 2003 Total funding[a]	Fiscal year 2003 LDRD funding
Department of Homeland Security	[e]	[e]	0.4	[c]
Department of the Interior	[b]	[c]	1.6	0.1
Other federal agencies	15.8	0.8	12.6	0.7
Nonfederal sources	48.8	2.5	46.2	2.6
Total	**$1,615.7**	**$86.0**	**$1,742.9**	**$100.0**

Source: Sandia National Laboratories.

Note: All funding amounts are in fiscal year 2003 dollars. Totals may not add due to rounding.

[a]Includes all funding that the laboratory billed to DOE for work performed during the fiscal year.

[b]Less than $1 million in total funding.

[c]Less than $50,000 in LDRD funding.

[d]Includes work for other DOE laboratories, contractors, and/or facilities.

[e]DHS began working with DOE's laboratories in fiscal year 2003.

Comments from the Department of Energy

Department of Energy
National Nuclear Security Administration
Washington, DC 20585

APR 12 2004

Mr. Ric Cheston
Assistant Director
Natural Resources and Environment
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Cheston:

The Department of Energy, to include the National Nuclear Security Administration, appreciates the opportunity to have reviewed the proposed report, "FEDERAL RESEARCH: Information on DOE's Laboratory-Directed R&D Program." The Department agrees with the report and further appreciates the efforts of our respective staff's to capture the pertinent information for each question that the report addresses.

Since the proposed report has no recommendations associated with it, the National Nuclear Security Administration, on behalf of the Department of Energy, has no formal comments related to the report.

Should you have any questions, please contact Richard Speidel, Director, Policy and Internal Controls Management. He may be reached at 202-586-5009.

Sincerely yours,

Michael C. Kane
Associate Administrator
for Management and Administration

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